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Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

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THE ORGANIZATION AND FUNCTIONS OF THE MEDICAL DEPARTMENT OF THE UNITED STATES NAVY

CAPTAIN FREDERICK R. HOOK (MC) U.S.N.
Washington, D. C.

ALL activities of the Medical Department of the Navy come under the direct supervision of the Bureau of Medicine and Surgery, which was established by law in 1842. The activities of the Bureau are organized along functional lines, to include eleven divisions. These are:

1. The Division of Administration.
2. The Division of Personnel.
3. The Division of Dentistry.
4. The Division of Physical Qualifications.
5. The Division of Preventive Medicine.
6. The Division of Aviation Medicine.
7. The Division of Matériel and Finance.
8. The Division of Inspections.
9. The Division of Planning.
10. The Division of Publications.
11. The Division of Red Cross and Veterans' Administration.

To make any attempt to discuss the setup of these divisions would be entirely too time-consuming, and I am afraid uninteresting. I shall limit my remarks chiefly to the problems of personnel, and to our plans for the care of battle casualties.

Briefly, the functions of the Naval Medical Corps can be listed under four headings:

1. The proper selection of personnel.
2. The care of the sick and injured.
3. The maintenance of physical fitness of our entire personnel.
4. The elimination from the Service of the unfit by retirement or by medical discharge.

The Navy is made up of the Fleet with its sup-

porting bases. It takes years to build a battleship and months for the smaller ships. This gives us a chance to plan ahead, and to build up personnel against the day of commissioning. Modern navies consist of many different types of ships. With the time at hand, it would be impossible to dwell at any length upon the individual functions of the medical personnel of these various units. We know, however, that the mutual support of these various highly specialized units is of the greatest importance in battle, and that the highly differentiated functions of a modern naval medical service indicate that the duties of the medical officer on recruiting duty, in the laboratory, in the surgical operating theater, in the field, afloat, in the diving unit, and in the air, all converge toward the same objective, that of maintaining a readiness for wartime conditions.

The policy of our country in the past has been to maintain a small standing Army and Navy; therefore, when a national emergency arises, our armed forces merely serve as a nucleus around which a much larger number of civilians and reserves crystalize. For this reason it is fitting that the regular service medical officer, particularly in the latter half of his career, should develop a well grounded knowledge in military medicine. When war comes he must be prepared to surrender his purely professional duties to an equally competent, available reserve officer, and assume duties requiring long military experience.

The onset of our present building program found us with 875 regular medical officers on active duty. This was somewhat under our allowance, which is six and one-half medical officers

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per thousand of enlisted and officer personnel in the Navy and Marine Corps. With the rapid shore expansion and commissioning of new ships, it soon became necessary to call to active duty, members of our reserve force, which had been built up through the foresight of our policymakers during the past few years. At the present time there are more than 3,000 regular and reserve medical officers on active duty with the Fleet and on Shore Stations. Should recruiting continue at its present rate, it will be necessary to more than double this number by the end of the year.

Doctors may obtain commissions in the regular service in two ways: (1) graduates of Class "A" Schools who have had an internship of one year may be commissioned as Junior Grade Lieutenants, providing they meet the physical requirements and pass the professional examinations; (2) recent graduates of Class "A" Schools may be appointed as Acting Assistant Surgeons and after serving a year's internship in a Naval Hospital then be commissioned as a Junior Grade Lieutenant.

The Medical Corps of the Naval Reserve consists of two classes: (1) the Volunteer General Service Class MC-V(G); and (2) the Volunteer Special Service Class MC-V(S). The physical requirements for appointment in the General Service Class are the same as in the Medical Corps of the Regular Service except that the age limit is thirty-five instead of thirty-two as in the Regular Service. The maximum age limit for appointment in the Special Service Class is fifty years. Officers in this class are not required to pass such a rigid physical examination and are recruited for shore or hospital ship duty only.

The rank a candidate obtains upon entering the Reserve force depends chiefly upon his age and professional qualifications.

The staffs of our naval hospitals are now made up chiefly of reserves. Knowing of the great sacrifices that many of these officers are making in abandoning their civilian work, it has been a revelation to us in the regular service to see with what enthusiasm they have turned to on their military duties. Their zeal and industry has brought new and refreshing blood to our ranks.

In addition to the medical reserve officers in the General and Specialists classes, we also have 111 Medical Specialists Units. Each of these units consists of eight medical and one dental officer.

The specialties represented are: general surgery, orthopedic surgery; internal medicine; psychiatry; urology; otolaryngology; roentgenology; and prosthodontia. These units are the nuclei for assignments to naval hospitals, hospital ships and other medical department activities, requiring a complete medical corps organization. Practically all of them have been called to active duty since the onset of the national emergency. Many of these units were organized at teaching centers throughout the country, and several of the principals are key members of medical school faculties. The Bureau appreciates the need for a continuous flow of medical school graduates, and intends to disrupt teaching activities as little as possible; for this reason each principal member has an alternate, who, at the time of mobilization, proceeds with his unit, if for any reason the principal cannot go.

It is estimated that in addition to the specialists in the various branches now on active duty, the following number will be necessary to care for the Navy's needs:

Allergists	34
Anesthetists	85
Cardiologists	40
Clinical Pathologists	125
Dermatologists and Syphilologists	180
Gastro-enterologists	30
General Operating Surgeons	500
General Operating Surgeons Assistants	150
Internists	550
Pediatricians	175
Neurologists, Psychiatrists	125
Obstetricians and Gynecologists	125
Neurosurgeons	100
Radiologists	125
Ophthalmologists	50
Ophtho-otolaryngologists	200
Orthopedic Surgeons	175
Maxillo-facial Plastic Surgeons	40
Thoracic Surgeons	50
Tuberculosis Specialists	45
Urologists	100
Public Health Specialists	32
Flight Surgeons	120
Aviation Medical Examiners	91
Tropical Medicine Specialists	20
Deep Sea Diving Specialists	32

The rapid expansion of the Navy has also produced a great need for enlisted medical personnel. It has been the policy of the Navy in the past to allow men to transfer voluntarily, to the Fleet Naval Reserve Force after sixteen to twenty years of service. The services of these men on re-call to active duty have been invaluable. By increasing the number and capacity of our Hospital Corps Schools we have been able to produce a sufficient number of non-technical hospital corps-

men for ordinary duties. There has been, however, insufficient time to train men in the highly technical ratings, so again we have had to turn to our civilian friends for their x-ray technicians, dental mechanics, laboratory technicians, basal metabolic technicians, male nurses from psychiatric institutions, embalmers, et cetera.

The fire power of a ship, to a great extent, determines its fighting ability. A ship to be 100 per cent efficient must have a mentally and physically fit crew, as nothing disrupts organization aboard ship more than men on the sick list. Months are required to develop a well trained crew; a gun's crew presents teamwork at its highest state of efficiency, every man being a specialist in his assigned task. With this in mind, psychiatrists and psychologists are on duty at naval training stations to weed out the mentally unfit. Knowing that physical examinations alone frequently fail to reveal incipient and arrested pulmonary tuberculosis, we are now x-raying the chests of all recruits upon their arrival at the training stations. This is done with 35 mm. films. All of our naval personnel has now been actively immunized against tetanus by the use of tetanus toxoid. Yellow fever and typhoid fever immunizations have also been completed. Recent research work done by our epidemiologic units at naval training stations shows that, contrary to the generally accepted belief, a large percentage of recruits are susceptible to diphtheria. If further work along these lines substantiates these findings, it is probable that all Schick positive men will be actively immunized against diphtheria.

Hospital expansion in the Navy has kept apace of the personnel growth, so that now we have over 20,000 beds available. This number will continue to increase as present building and proposed units are completed. Modern warfare calls for mobility, and for this reason mobile base hospitals have been devised. These are 500-bed units, several of which have already been organized. Two of these are now functioning on our island bases. The first of these units assembled was set up on an island base where it functioned for several months; it was then dismantled, packed, and transported to another island base, a distance of 900 miles, where it was reassembled and resumed functioning within a few weeks. Strictly speaking, this is not a mobile hospital, but it probably approaches mobility about as near as any self-supporting base hospital can. We

have our smaller well equipped field hospital units which accompany our field forces; these are entirely mobile.

The geographical distribution of our forces takes them to all extremes of temperature and climate. Excellent courses in tropical medicine have always been a part of the curriculum at the Naval Medical School, and many of our medical officers have had duty on tropical stations, so we have little to fear from this angle. Our experience in the colder climates, however, is less extensive. There are many things that we must learn in regard to clothing, food, housing, et cetera. We must find a way to maintain the efficiency of our personnel in subzero weather. We are also mindful of the questions of sanitation and preventive medicine in our new bases, and are indebted to the Public Health Service for the aid they are giving us along these lines.

Ventilation aboard ship has been, and continues to be the basis of a great deal of study. Air conditioning ashore is a fairly simple matter, but aboard ship the equipment is costly and bulky; so far it has not been entirely satisfactory. Unless fresh air can be furnished to the crew at their fighting stations and in their living quarters, their efficiency is bound to suffer.

The medical department has had its share in developing diving to its present state of efficiency, so that now dives of more than 400 feet are made, and work by divers accomplished beyond 300 feet. The experience gained in this subsurface work is now being put to use in attempting to solve the problem of how to keep our pilots functioning efficiently at the other extreme, i.e., above an altitude of 37,000 feet.

In connection with the Army, the American Red Cross, the Medical Division of the National Research Council, and civilian groups, much research work has been done on the preparation of blood plasma. This has resulted in standardization of preparing and packaging of dried plasma. This plasma will be available for use on all ships.

The anesthesia problem aboard ship is a rather perplexing one. Spinal and local anesthesia have long been favorites of the naval surgeon, due to the fact that he seldom has a trained anesthetist to rely upon. During peacetime when the ship is open and ventilation is adequate, ether has been used freely, but working under battle conditions with compartments closed up tightly, ether or any of the explosive gases would be extremely dan-

gerous to use. For this reason, operations that cannot be done under local, spinal, or intravenous anesthesia, will probably require the use of chloroform.

Medical Tactics—Battleships are heavy and comparatively slow. They are built to take punishment as well as to deal it out. A ship to be able to fight must first be able to float, and for this reason Naval Architecture has developed an extensive system of compartmentation which has greatly increased the floatability of these ships. This was well demonstrated in the Bismarck which, after having been crippled by aerial torpedoes, took an unbelievable amount of punishment before she could be sunk by gunfire. In battle, water tight integrity of compartments is of the greatest importance. In the past few years we have heard a great deal about damage control aboard combatant ships. With it have come drastic changes in the arrangement of the medical department for battle, and its function during action. The care of casualties during battle must be considered as a phase of damage control, for matériel damage and personnel damage go hand in hand.

Consistent with the importance of damage control on combatant ships, two fundamental principles are enunciated:

1. The water-tight integrity of the ship, regardless of the wounded, must be preserved.
2. Fire-power, as delivered by the batteries of the ship, regardless of the wounded, must be maintained.

The medical personnel aboard a capital ship in wartime consists of three medical officers and one dental officer. There is also one hospital corpsman for each hundred of the ship's company. With a wartime complement of 1,800 to 2,000 men there will be 18 to 20 hospital corpsmen aboard. This number will not afford a skilled medical attendant for each compartment. In men-of-war only the vulnerable and fighting parts of the ship are protected by heavy armor; this does not include the sick bay, which is above the water line, and therefore not protected by side armor. Under battle conditions this station must be abandoned.

To insure the services of medical personnel after action, and to conserve the medical and surgical supplies and equipment, it is necessary that

they be distributed in two or more protected areas behind armor. All compartments being tightly closed during battle conditions, relative immobility is imposed upon all personnel. This time is utilized to prepare matériel and equipment for the post battle rush and to drill hospital corpsmen in their duties. In our peacetime drills we try to conceive of every possible type of damage that the ship and its personnel might suffer. It is not difficult to simulate many of the states of matériel damage to the ship and its equipment. We cannot, however, produce mutilating wounds, severe states of shock, burns, et cetera, just for training purposes and, therefore, feel that the physical standards and professional qualifications of our medical personnel, both commissioned and enlisted, must be maintained at a high level if our wounded are to be assured of the best possible treatment.

The inability of medical personnel to get to the wounded at their battle stations makes it necessary that all members of the crew be instructed in first aid measures. Men are taught to apply occlusive dressings properly, to apply a tourniquet to a leg or arm, to apply a dressing to a burn, to recognize the need for immobilization of a fracture and the care in moving men with fractures. They are also taught to relieve suffering by the use of morphine supplied in syrettes. Many of you will raise an objection to putting this potent drug in the hands of laymen. If the wounded are to get relief from pain early there is no other alternative, as it may be hours before they can be reached by a member of the medical department.

Prior to battle, first aid material in metal boxes is distributed to every vulnerable part of the ship, where it will be available for self or mutual aid. The supplies depend upon the number of men in the compartment, the hazards of the position, and the type of casualties anticipated. In the turrets and other large compartments where accidents are apt to occur, selected lay members of the crew are especially trained in first aid measures, and it becomes their duty to direct the handling of the casualties. Two per cent of the ship's crew is instructed in transportation of the wounded; these men are usually the ship's bandsmen and they make up what is known as the ambulance party.

During action aboard a combatant ship all watertight doors and hatches are controlled by

central station. When matériel damage occurs in any part of the ship, and it is possible to modify this tightly closed condition of the ship, repair parties move to make such repairs as are possible. Accompanying each of these repair parties are one or more hospital corpsmen, and stretcher bearers. These men give what aid they can and when possible move the wounded to or toward the battle dressing station.

The maneuvering and preparation of a Fleet for battle may take hours or days; the battle itself seldom lasts more than a few minutes. The constant menace from submarines and from the air, however, keeps the ships in a state of perpetual readiness for battle. Immediately upon cessation of battle or during a lull in action, the medical department has its greatest opportunity to contribute directly to the military efficiency of the ship. This is done by:

1. Restoring to fighting efficiency the wounded men made ill by prevailing battle conditions, and those incapacitated by the milder effects of chemical agents. These will find their way by designated routes to the proper dressing stations.
2. Clearing the gun and other battle stations of the more seriously wounded. These must be helped or carried to the dressing or chemical decontamination stations.
3. Treating those whose injuries incapacitate them for duty.

It is of the greatest military and humanitarian importance that all severe battle casualties be removed from fighting ships at the earliest possible time. Upon cessation of hostilities, stretcher parties are sent out to all parts of the ship, and the wounded brought into the battle dressing stations where they are sorted out. Dressings are adjusted and wounds examined for hemorrhage. If tourniquets have been applied they are removed and active bleeding controlled by compression or by tying off the bleeding vessel. Prophylactic shock treatment is instituted by giving hot drinks, food, and morphine. Fractures are splinted and prepared for transportation. If shock is present, blood plasma transfusions are given and the patient is not evacuated until this condition is well under control. Chemotherapy is instituted at this station, and casualties are classified as to the priority of evacuation. Major oper-

ations that can be deferred with safety are not done at the dressing stations aboard combatant ships, but await more favorable conditions in a hospital ship or shore station. It is, however, not only possible, but probable, that owing to the lack of supporting hospital facilities, definitive treatment of the wounded must be undertaken aboard combatant ships, and for this reason, equipment and matériel are always at hand, and peacetime training of personnel always embraces this possibility. With this in mind, one of the medical officers assigned to each capital ship is a qualified surgeon.

Wounds of naval warfare are characterized by their great extent, their multiplicity, and the frequency with which secondary as well as primary missiles and pieces of clothing are driven into the tissues; sepsis may be expected in all of them. Burns have always been common, but are even more frequently seen in this modern type of warfare. They are due to blasts from exploding shells and bombs, burning powder, cordite, or fuel oil. A bomb exploding in a compartment below decks will set up a blast wave, which in its search for an exit, will proceed along passageways and air ducts, and may cause burns at some distant part of the ship. The lightest type of clothing will protect against these waves. Flash helmets and gloves made of light material will also protect the face and hands.

New weapons of destruction are constantly being developed which call for newer methods of prevention of casualties. The efficiency of aircraft has made it necessary to build heavier armor in decks of capital ships, and to provide more protection for gun's crews on the upper decks. Bombs missing ships but falling in the immediate vicinity, explode with such violence that glass in port holes is shattered with resulting casualties in the compartments. This means that new ships must be built without portholes, and those in the older ships blocked out. Mines exploding beneath ships, and bombs or torpedoes exploding below decks, cause such a violent upheaval of that part of the ship, that not only are men's feet and legs fractured, but the upward thrust against the deck overhead also produces severe intracranial damage. For this reason men not actually at work should spend as much time as possible in the reclining position rather than sitting or standing.

In battle, the casualty list of a man-of-war may

be comparable to that of a regiment during a hard drive. The medical department of the ship must be entirely self-sufficient. A six months' supply of medical and surgical stores are aboard at all times. Light armored forces, destroyers, submarines, and cruisers are likely to be sunk or escape with little damage. Air force casualties may be heavy, but they will require little treatment or evacuation. The same can be said for submarines. We are not greatly worried about gas casualties aboard ship as this type of shell makes an uneconomical load for aircraft; certainly, the Fleet that has control of the air need not fear casualties from this source. Decontamination stations, however, are established aboard all ships.

As a working basis in the past we have expected that two fleets of equal strength would probably inflict about 20 per cent casualties on each other before one or both withdrew. As the size of the fleets increase, the percentage of casualties as a rule will decrease. These estimates have been based on past wars; with the present efficiency of submarines and aircraft they may be entirely too low.

In practically all naval battles, statistics have shown a high ratio of killed to wounded, it being placed at about 1 to 1. Drowning is a major factor in maintaining this ratio; the high mortality rate in turret accidents is also a factor. Individual ships will show a wide variation in the percentage of the cause of deaths; for instance, on one ship practically all deaths will be due to shell wounds, on another it will be all burns, and still another all drowning. Drowning is responsible for more deaths than all other causes combined.

There will always be a marked discrepancy between the force casualty rate and the maximum casualty percentage for individual ships, as some ships will be hit heavily, while others will escape entirely. The wounded percentage should be given primary consideration in developing medical plans for action. Allowing a margin of safety, we will assume that the maximum number wounded on individual ships will be 15 per cent of the ship's complement. It is this maximum wounded rate of individual ships that determines the medical and surgical wartime requirements for this type of ship, while the force wounded rate serves as a basis for computing the evacuation facilities, and this figure is used in deter-

mining the bed accommodations to be furnished by hospital ships or shore stations.

Evacuation of the wounded from combatant ships is frequently a difficult problem. It may be by direct transfer from ship to a shore station, or indirectly by the use of small ambulance boats. Casualties may also be transferred to other vessels such as hospital ships, hospital transports, or other combatant ships. When conditions permit, it may be possible to evacuate the severely wounded by air ambulance. In this war as in the last, hospital ships enjoy no immunity from attacks by the enemy. Our Government in 1918 found it a safer procedure to bring home the wounded from France by returning convoyed troop transports, than by the use of unconvoyed hospital ships.

Hospital ships are of two types—Class "A" and "B." Class "A" or fleet hospital ships in times of peace, travel with and serve the Fleet as floating hospitals. During action their function remains about the same, but for many reasons they cannot be in the immediate neighborhood of the action. Their location, therefore, will depend to a great extent upon the distance of action from an established naval base. Class "B" hospital ships are designed to function primarily on the lines of communication, transporting medical matériel and personnel to the theater of operation, and evacuating the wounded from that area. The longer the lines of communication, the nearer this class will approach that of Class "A" in equipment and personnel. One of the prime requisites of a hospital ship is its ability to take on patients speedily from another ship at sea, and to evacuate them to a hospital on shore.

From what I have already said I think you will agree that the problems involved in Naval Medicine are quite different from those in civil practice. To get an idea of the variety of our work, I would have you visualize the Fleet as being made up of practically every conceivable type of combatant ship, and each type of ship presenting different problems, from a medical standpoint. Battleships are nothing more than highly mechanized, mobile, fighting fortresses, whose guns possess tremendous power of destruction. Unless these guns are manned by healthy, well trained, alert crews, their destructive power to a great extent is impaired.

The crews of these ships are made up mostly

of young men, many of them still in their teens. They are fine boys; they come from our homes throughout the country. They are, however, subject to all of the woes of youth, just as other boys are; they get homesick and seasick, they have family troubles and bellyaches, and some are simply slow in adjusting to service conditions. So it is that the Medical Officer's job aboard ship is a bit broader than merely caring for a lad with a cold or an acute attack of appendicitis. His relation with the crew puts him in a position in which he can be of inestimable value in maintaining the morale and fighting efficiency of the men.

The Medical Department serves the line as a part of the military team, and to function properly, must adapt itself to the conditions created by military tactics and operations; therefore, it is essential that those who serve as a part of the medical units should have a good working knowledge of line tactics. Some of our theoretical peacetime training ideas we know have not proved out under battle conditions, and it has been necessary for us to revise our medical tactics so that they serve the line to its best advantage; this we are prepared and glad to do at all times.

Many of you, I am sure, would be interested in knowing how the casualties were handled in Pearl Harbor. This I cannot go into in detail at this time. To give you an idea of the problem that presented itself on December 7, I would have you visualize a well organized and staffed 500-bed hospital in your own community, and have the census of that hospital more than doubled with acute, surgical cases in a period of three hours. Remember, also, that a large number of these patients were unconscious when admitted to the hospital and that the majority of them were suffering from some degree of shock.

Mass treatment must always be a compromise, the individual being sacrificed for the good of the many. Undoubtedly, lives were lost that could have been saved under different circumstances. To have been completely prepared for such an influx of patients would have been an utter impossibility. The information I have received from Pearl Harbor is to the fact that the Medi-

cal Departments of both the Army and Navy handled the difficult situation as well as it was possible to do under such trying conditions. I had the opportunity of seeing practically all of these patients seven weeks after the blitz and was amazed at the rapid recovery most of them had made.

May I ask you to keep in mind constantly, the fact that we are now in mortal combat with inhuman, ruthless enemies, who believe that they are fighting for their very existence? I wonder if history will not record, that it is we who are now fighting for our very existence?

To you who have lost confidence in the heavy battleship, I say be patient and remember that there is no ship built that cannot be sunk, if the attacker is willing to pay the price. With adequate protection from the air, under and on the surface of the sea, the battleship will have its day, and I feel confident that it will be in on the kill.

It was my good fortune to have served throughout the first world war in France as a battalion surgeon in a Marine organization that was brigaded with the Army. This experience led me to believe that the courage and fighting ability of our men, though inadequately trained in many instances, was unsurpassed. During the ensuing years I have gotten a fairly good idea of the capabilities of the sailor-man. The almost unbelievable devotion to duty and the acts of heroism performed on December the 7th was no surprise to me; I would have expected it of such men.

Let us not be complacent, but also, let us not be blinded or frightened by the flood of propaganda disseminated by our foes, both at home and abroad. Let us be honest with ourselves and admit to the strength of our enemies, and be aware of the tremendous task ahead of us. There has never been a time in the history of our country when unity of purpose was so important as it is at the present time. It is not enough that the Armed Services work together smoothly; our civilian forces must also be behind us to the last man and woman if we are to win this war and to continue to exist as a free nation.

THE ROLE OF THE HOSPITAL IN CIVILIAN DEFENSE

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MODERN warfare as introduced by the axis powers has produced certain expressions which have been used so much as to seem nothing but banal platitudes. Such terms as "total war" and "blitzkrieg" are often heard now, yet they were unknown in previous wars. Obviously, modern warfare has introduced some new techniques and requires radical changes in our conception of warfare.

Total war means exactly what it implies. Nations now go to war with every means at their command. No longer do the armed forces alone carry on the war; every man, woman and child is involved in some way. Civilian casualties are frequently greater over a period of time than those of the armed forces. Disruption of the activities of the civilian population may serve the enemy as effectively as overcoming army or navy units. War casualties often become as serious a problem to the hospitals at home as they are to the hospitals in the field of battle. Epidemics at home may well be as serious a handicap to the prosecution of the war as epidemics in the armed forces.

The "blitzkrieg" or lightning war means that like lightning it may strike anywhere with sudden fury. The element of surprise is paramount here, unleashing an attack with lightning rapidity where least expected. Finding a community unprepared, it is easy to play havoc on its industries and its people. Incendiary bombs start blazing infernos which spread rapidly, bringing death and destruction all out of proportion to the actual bomb load employed.

In the early days of the blitzkrieg on Great Britain the casualties were high, the damage extensive. If the armed forces were relatively unprepared how much less so was the civilian population. Out of the chaos there gradually developed a system of civilian defense, a plan of action based on organization, training and discipline. Military strategy is a science of long standing but now there developed a new science of warfare—civilian defense.

At first there was a tendency to regard bomb-

ings in the cities as disasters which could be handled as any other disaster. This proved inefficient and impractical. Under war conditions, with widespread bombing, it is often impossible to obtain aid from neighboring communities. All too often they were also hard hit. There is not time to leisurely salvage what remains when the enemy may return again and again. It became evident that so far as possible each community must be self-sufficient. Peacetime disaster relief methods would not suffice.

The medical care of civilian casualties became the duty of the medical division of civilian defense. Organizing the medical resources of the community gave rise to the development of what became known as Emergency Medical Services. Experience soon demonstrated that the only practical plan was to base the medical units in the hospitals. In other words, the hospital is the very cornerstone on which the emergency medical services rest.

This represents a distinct departure from the usual peacetime disaster relief organization. The older system of putting medical teams into the field, totally unrelated to hospitals, is not feasible. The hospital staff with its nurses and other trained personnel represents the only logical system. These people are accustomed to working together, and the staff represents a balanced organization. It is important, too, that certain personnel be designated to remain at the hospital to care for incoming casualties. The tendency to strip the hospital of its staff in an emergency must be guarded against. Surgeons and others with special training may be of comparatively little value in the field but are of inestimable value in the hospital. Less skilled persons may serve as well in the first aid posts.

The hospital is also the logical place to obtain supplies. There should always be on hand an ample quantity of equipment and medical supplies. It is not intended they should have vast stores of unused material but rather a sufficient stock on hand to handle any emergency. Contrast this again with the unrelated first aid posts that must of necessity have a store of supplies

Read at the War Session of the American College of Surgeons, Minneapolis, Minnesota, May 1, 1942.

which may never be used. Multiply this many times and it becomes obvious there must result a serious shortage of such equipment and supplies.

The cost of hospitalizing persons injured as a result of enemy action will be borne by the federal government. A sum of money has already been set aside for this purpose. It is also proposed to reimburse at least in kind, for supplies used in caring for the casualties. Rates to be paid for hospitalized patients have been established. The regional medical officers for civilian defense are at present setting up the administrative machinery.

Publications of the Medical Division of the Office of Civilian Defense have outlined the approved method for organizing the hospital staff into field units. They have also indicated the equipment and supplies which will be found suitable for first aid posts and casualty stations. It should be emphasized here that casualty stations are to serve as hospital substations, located in suitable buildings in areas which may be remote from the hospital and not otherwise adequately served. They may act as filtering stations to prevent overloading the hospital with nonserious cases.

In certain vulnerable target areas it may be necessary to evacuate the hospitals at any time. This may be a partial or total evacuation. It may well be necessary to remove chronic cases from receiving hospitals to make room for the reception of casualties. On the other hand, the more protected hospitals may be called upon to receive patients from evacuated hospitals. This means there must necessarily be a closer relationship between the hospitals, in some cases what amounts to an affiliation. Hospital administrators have a serious responsibility in planning now for any eventuality.

The program of the military in taking over the entire output of blood plasma from the commercial laboratories brings about the problem of securing sufficient quantities for the civilian needs. It will be necessary that all the larger hospitals, equipped with adequate laboratories, plan to establish a blood bank if they have not already done so. These hospitals having blood banks will need to expend their facilities to be prepared for any sudden demand either from their own or nearby communities. Recognizing this need the federal government, through the

medical division of the office of civilian defense, is prepared to offer consultation and advice to those hospitals considered as most likely to have demands made upon them.

The program for the development of extensive blood banks in the hospitals is more than a plan to meet emergencies. Blood transfusion is not a new procedure although many of the refinements of technique are recent developments. In the past, however, the blood transfusion was a tedious, expensive procedure, consequently, too often used only in extreme emergencies. With the proper collection, preparation and storage of blood or plasma it becomes a relatively simple and inexpensive treatment and need not be reserved for patients in extremis. The remarkably gratifying results obtained at Pearl Harbor were due in a large measure to the prompt and repeated blood plasma treatments administered to the casualties. This indicates that blood transfusions, either of whole blood or plasma, will become a more standard procedure in all hospitals. They must be encouraged to be prepared for it.

Practically every hospital has suffered the loss of staff members to the armed forces. It is quite certain there will be further losses. In spite of the hardships this works upon the hospitals, there is not one that is not proud its staff members are serving their country. More sacrifices will be made and made cheerfully to insure sufficient medical personnel for our army and navy. Necessarily, this will impose added responsibilities to those who remain at home. In addition to the increased load of caring for the sick there will be the need for preparing for emergency medical services in these days of total war.

Not alone in medical staff personnel are the hospitals being depleted. Nurses, too, are being called into the services until hospitals are finding it more and more difficult to replace them. Foreseeing the inevitable shortage of nurses and profiting by the experience of England there have been established in many hospitals under the direction of the Red Cross, classes for the training of nurses' aides. This program has been explained to you and yet certain misconceptions occur. It cannot be overemphasized that this is not a program designed to produce practical nurses. Wherever the program has been instituted, reluctant hospital directors and nurses have found themselves enthusiastic before the

first class is completed. These people are not being trained in a vocation but are women of independent income volunteering to aid in the hospitals without pay. Trained to work only under the direction of graduate nurses they increase the nurse's efficiency by doing certain routine tasks requiring no professional training. The hospitals have not yet explored the possibilities in this field.

Another advantage to the hospital gained by training nurses' aides lies in the field of public relations. Intelligent lay women from your community have an opportunity to learn at first hand what is meant by high standards of medical care, what safeguards the modern hospital provides for its patients. These women can and do carry the message to their friends which the professions themselves are too modest to boast about.

When the bombs fall on certain vulnerable target areas it is quite likely calls will come for medical aid to hospitals not at the moment involved. With this in mind it is proposed that a working group, to be used in such an emergency, be organized to move as a unit to the stricken areas. Here again a plan is proposed that, under civilian defense, civilian doctors be organized much on the lines of any army base hospital, although much smaller. Such a unit could move on short notice to bring temporary aid

wherever necessary. It is not planned they would need to go far from their home area, nor would they be called for extended service. At the same time the need for organization now is obvious. Provisions are being made for these physicians to go when and if needed with appropriate officer's rank, salary and traveling expenses.

These are indeed trying times for hospitals and the medical profession. Let it never be said that we shirked our responsibility. There is a very important job to be done and it will be done. It is not all blood, sweat and tears. Out of it already there has developed a closer understanding, a closer feeling that we are all for one and one for all. No longer can we indulge in the luxury of personal feuds, standing on our prerogatives and other such nonessentials. The luxuries, superfluities and *fol de rol* will be abolished. The principles and high standards need not be threatened. A return to the primary principles of medical care—unembellished though they be, cannot be anything but a blessing.

In the meantime rest assured, the hospital and medical affairs in the federal government rests in the hands of responsible people from your own ranks. Our duty is first to win the war; we do not feel it necessary to sacrifice our ideals or standards but rather that because of our ideals success is inevitable.

MAINTAINING STANDARDS OF HOSPITAL SERVICE DURING THE WAR

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THE standardization program for hospitals was developed following the World War. The minimum standard has not been essentially changed. However, special minimum standards have been developed for practically every professional department of the hospital. Most of them have called for additional personnel, equipment, space and money. We now take them as a matter of course in most hospitals and would hesitate to forego any of them.

In normal times, many of these services have been kept up with the help of interns, techni-

cians, students and the younger members of the staff at a comparatively small cost.

Many hospitals, because of their ability to obtain sufficient funds, have far exceeded the standards. Others, because of their teaching value, have been able to attract young physicians at nominal stipends for their services.

It is really remarkable how hospitals were able to carry on during the years of depression on the high plane established during the period of prosperity.

But now we are at war and if we are to continue to give "the proper care to the sick and injured" as this program is summarized in the

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Manual of the College, we must readjust our hospitals on the basis of the present and the immediate future. All factors must be considered and the basis for wartime service will differ in all parts of the country and in all communities.

All hospitals in the community will have to be considered together and the various departments will have to be considered on the basis of the whole institution. Much of the duplication of personnel and equipment will have to be eliminated. We must take our place as a part of the war program and endeavor to eliminate all who can be spared for war service from our organization. The tendency to hang on to all possible for our own hospital is not in the spirit of the times.

It will become necessary that certain procedures which have seemed to be absolutely essential in ordinary times will have to be modified and in many cases completely eliminated. We will not only have the obligations of taking care of our ordinary services, but we will have additional responsibility because of the fact that many of the doctors, nurses and others in the community will be called into the service. Home calls will be greatly limited and additional patients will require the services of the hospitals. It will not be possible for us to build new buildings. We will have to get along with what we have, and in many instances with much less than we now have.

But just how are we to maintain our standards of service during such a period? As time is limited, I am going to endeavor to give a few suggestions which may be of some service.

1. Hospital board members, administrators, members of the staff and heads of a department should obtain a copy of the "Manual of Hospital Standardization" of the American College of Surgeons and familiarize themselves with what is considered necessary to assure each patient entering the hospital complete scientific care, and with these standards in mind proceed to streamline the organization to assure such care with the least possible friction and full use of facilities.

2. A careful study should be made of the physical plant and where possible departments should be combined or eliminated so that each special laboratory, diet kitchen, nurses' station and service department may serve a maximum number of patients with the least possible effort

and expense. In many hospitals the space which is now used for nurses' and other employees' quarters could be used for patients.

3. The personnel of the institution should be carefully studied, to assure that maximum service is given to the patients by the professionally trained personnel and where possible in all departments lay workers should be trained to assist the professional staff so that as many as possible may be released for the service of our country. In many instances the wives of our employees who have been called to the service will be found most useful. These lay workers should be trained to work in a given special department and not transferred from place to place. Full use should be made of volunteer workers under trained supervision. Married nurses should be called into service in our hospitals, and in certain communities, convalescent patients and patients with chronic diseases should be cared for in homes or institutions outside of the hospital. All of the employees should be made familiar with the importance of the steps we are going to take, and all of them should be impressed with their responsibility. Those who are unwilling to cooperate and who are more interested in outside influences, should be eliminated from the hospital staff. The care of the sick is too important, especially at this time, to carry those who are not loyal either to the country or to the institution. We should be alert for signs of sabotage and espionage. In other words, we must have absolutely loyal employees under a strict democratic discipline to maintain efficient service.

4. We must see that our plant is in order. Necessary maintenance and repairs must be kept up. In view of the difficulty in obtaining certain supplies and equipment we are informed that it is to the interest of the war program that our storerooms have necessary replacements in stock to make repairs with the least possible confusion. It is not hoarding to fill our coal bins now. This will make more cars available for war purposes in the fall. In order to give the greatest possible service we should follow the suggestions which have been outlined by the American Hospital Association to be able to care for additional patients. The administrators should be familiar with the war program in the community but should recognize the importance of the hospital and keep tight hold on the reins as the hospital may become the most important agency in the com-

munity on a moment's notice. These are general statements but are, I believe, fundamental.

The Board and Administrator

The responsibility for any hospital program rests on the Board of Management and there is no place on hospital boards for men with selfish motives at this or any other time. The Board must function through a trained administrator. His responsibility, under this war program, is greater than in normal times. He must know about priorities, the trend in prices, the availability of commodities and keep supplies available not only for normal use, but for any emergency which may arise. There has never been a time when the hospital administrator needed vision, ingenuity and originality as he does now. He must lead and must have the coöperation of the staff and all departments if the hospital is to render its best service at such a time.

I now wish to make a few suggestions relative to the important departments of the hospital. First, the Staff:

It has been said many times that a hospital is no stronger than the staff. This is especially true in these times. The purpose of the whole organization is to see that each patient receives the treatment as directed by his doctor. In order to function to the maximum, the staff must now be relieved of the many details which have been performed by younger men who have been or will be called into the Service. Records are most important and if we expect them to be kept up, it will be necessary to provide dictating machines or secretaries to assist the staff. Most hospitals do not take full advantage of the record librarian and their assistants. Forms and records should be studied and all but essential information eliminated. In some institutions the patients' name and family history will be found in four or five places in the chart and many times the name spelled in different ways. Under present conditions, staff meetings should be held at regular intervals and all members should be required to attend.

Heads of departments of the staff will be called into the Service and it will be necessary to combine departments in order to carry on. It may be necessary in some communities, where the staffs are depleted, for men in active practice to assume resident duties for several hours of the day in order to maintain uniform service.

All of this calls for a chief of staff with executive ability and firmness. He should be loyal to the hospital and the management and should be appointed subject to the approval of the Board.

The care of the service patients in most hospitals with the exception of serious conditions has been the responsibility of residents and Junior staff members in normal times. This will now call for additional service on the part of the available staff. The staff will also have additional responsibilities for the laboratory, x-ray, physical therapy, etc. Under the standards, especially trained physicians are required to head these important departments, but under present conditions, if the specialists are called, available staff men should assume this responsibility or in many instances, one man will be able to serve several hospitals. Hospitals without interns and residents will be the rule rather than the exception, and staff members will need to assume responsibility and perform details which have been passed to these men. Much of the work can be eliminated without seriously effecting the hospital service.

The Nursing Department

The nurses have always carried the heavy load in the hospital. During the past twenty years, the standards of nursing service have been greatly improved. Supervision has been increased, hours have been shortened, the work formerly done by the young student nurse has been taken over by orderlies and maids and in many hospitals. Most hospitals have already felt the shortage of nurses and with the appeal from the government for additional nurses in the service, the hospitals, in order to be loyal, will have to train additional personnel to take the place of trained nurses. This will be best accomplished by training young women to work in certain departments under the supervision of the nurses and in some cases even lay persons who have been trained for such supervision. This will work best if these lay workers are kept in their particular departments and not transferred to different divisions in the institution. In some communities married nurses have been called into service, either on full time or for a short time a day to relieve regular staff members. Those in such service should feel that this is service to our country in time of war, and should not expect excessive compensation for such

work. Special nurses and maids, who have been trained to help in the care of patients, should be relieved from detailed clerical work by the employment of clerks and the volunteer helpers. The "Grey lady" movement is of great value in some communities, but has not been developed in smaller communities, as it should be. This is a good time to develop these volunteer agencies. The Red Cross volunteers are now helping in some hospitals. Use of special nurses should only be permitted where the care of the patients call for special care, and should *never* be used except for patients so ill that the doctor feels that he must have this special care regardless of the ability to pay. In many instances, it will be found that one special nurse is able to care for several patients. All hospitals should study the nursing service carefully not only to conserve time and labor within the institution, but to accept their responsibility in the nursing service of the community. Hospitals are in a position to aid in the first aid program of the Red Cross.

After many years of effort on the part of the National Nurses Organizations, the government has finally recognized the importance of helping hospitals in their educational program and is subsidizing certain institutions in this work. Most hospitals are unable to finance nursing schools. A number of the fifty nursing schools which have been closed in the State of Minnesota could be opened, if the hospitals were given additional funds for their educational program.

It seems that the nurses' courses should and could be shortened during these times, and I feel that the nurses organizations will find a way to bring this about. Nurses who have been out of practice for many years have found it of interest to come into the hospital for refresher courses in nursing procedures, and have been found to be most useful because of the experience they have acquired since leaving their hospital work. These women naturally appreciate the importance of the hospital's responsibility to the patient and the community beyond that which is expected of the young inexperienced nurse, and they feel honored to have an opportunity to serve in these critical times.

I have always advocated the highest standards in the education of nurses. For the past several

years, it seemed that this had been overdone, but I am sure under present conditions that these nurses with their exceptional training will be of great service not only in the service of the government, but in the supervision and training of lay personnel for the civilian hospitals and the nursing program of the community.

Dietary Department.—The Dietary Department is one of the important departments of the hospital. According to the standard, a trained dietitian is required at the head of this service. The dietitian and her assistants should begin now to train lay assistants for certain services, as it will be difficult to find a sufficient number to keep the service on a normal basis during the war. The dietitian should be relieved of the purchasing as much as possible, but at the same time should have sufficient control of same to insure the foods required for adequate scientific diet. We should investigate the equipment of this department and be sure that parts are on hand to take care of emergency repairs. The storeroom should be carefully watched and staple supplies be kept available as much as possible. As this department spends about one-third of the money in the average hospital, it is important that it be kept under careful control at all times.

The Engineer and Service Department.—We are warned to be ready for emergencies. Service departments under the engineer will have this responsibility. Our engineer should be qualified, first, by meeting the requirements of the licensing board, second, by complete understanding of all equipment and machinery and with sufficient ingenuity to make necessary repairs without dependence on outside assistance. The engineer should train his assistants to be able to function if he is absent from the institution. It is imperative that he have a complete understanding of the electrical and water supply, with all switches, motors, cut-offs and so forth, and he should be familiar with the regulations which will be set up in regard to blackouts and other wartime precautions. He should see that equipment is available for the immediate removal and protection of all patients if necessary, and to set up facilities for the admission of an unusual number of new patients. The matter of fire protection is important and the fire fighting equipment, signals and so forth must be understood by the entire engineering staff. The local fire

department and the State Fire Marshall are glad to help make such plans. The instructions relative to the control of incendiary bombs must be understood. The engineer has a major position in the hospital at this time, and his advice and council should be respected by the Board and the Administrator. If his authority is not sufficient to carry on his functions, his value will be lessened. Too often men without vision and training hold these important positions in the hospital. Good men above military age are available if we are willing to pay the price. A qualified engineer should be on the grounds at all hours and, under present conditions, enough men should live in the institution to assure complete protection. One reason I emphasize this department is that women will have to assume positions formerly held by men as janitors, kitchen helpers and so forth, so this will mean that the engineer, firemen, carpenters, painters, electricians and watchmen will be about the only group available and should form a sort of emergency unit.

Where unions are involved, we should endeavor to convince them of the tremendous responsibility of their members at this time, and to have hospitals considered as a part of the defense machinery. On the other hand, we must realize that the need for mechanics is such in defense work, that we must cooperate by paying wages commensurate with those paid in other activities where such men are needed. The men in this department should be trained to perform duties in other than their special department and to relieve in as many positions in the department as possible.

Housekeeping.—This is an important department of the hospital which is not always given its proper place. A good housekeeper will work closely with the nursing and dietary departments. Duties of maids in many instances may be arranged so the workers are interchangeable. In most institutions, the maids should work as a part of the nursing staff and be directly under the nurse in charge of the unit. The maids can do many things for patients which have been done by nurses. They can be trained for this work and be limited to duties not professional. In many hospitals, workers now known as nurses' aids are making beds and, in some instances, bathing patients. These women can carry trays and perform other duties under the

supervision of the nurse as well as cleaning work, all of which will help at this time.

Patient Help.—In many hospitals, we have convalescent patients who can be of help and will be glad to render service if they realize the importance of it as a part of the war effort. Some of the work which has been done by occupational therapy department is not of practical value. I think we could find duties for these patients which would contribute much to the smooth operation, and we should take advantage of all such individuals, and I do not think, in some instances, it would be improper to give them a small stipend for the service rendered to the institution.

Out Patient Department.—Another department of the hospital which is most important at this time is the Out Patient Department. Many patients who are now filling beds in hospitals could be cared for as out patients. However, as the younger men have carried the load so far as professional care is concerned, it will be necessary that the older members of the staff take this as a part of their responsibility.

Social Service Department.—The Social Service Department is important and will have unusual duties to perform. However, as there is a scarcity of trained social workers, it would be well to try to find volunteer workers to carry on some of this work, as many patients can be discharged from the hospital if their home conditions are arranged for their care. In most communities, there will be found a social worker or a public health nurse who can give instructions to volunteers. Those who have received the first aid and volunteer training of the Red Cross should be of great help.

I have only touched a few of the highlights. To summarize, I would say that the Board, the Administrator and the heads of the key departments of the hospital will have to feel that their responsibility in this war effort is in their own hospital and to their own community, and that we should relieve as many workers as possible to enter the war service. We should conserve our supplies and to be sure that we are ready for emergency; that all possible beds are available in the most convenient locations for the care of a maximum number of patients, and that the

acute hospital should be primarily for the care of patients who can not be cared for otherwise and that other units should be found for the care of those who do not need this active care; that the Public Relations Program should be carried on in such a way that the whole community will

appreciate the value of their local hospital; that our hospitals will work together so there will not be duplication in the way of equipment and personnel; and where there is competition, that it should be on a friendly basis and all of us work for the one thing—*The Winning of the War*.

MAINTENANCE OF ADEQUATE PERSONNEL FOR HOSPITALS

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THE maintenance of adequate personnel in hospitals is a currently pressing problem which admits of no solution by formula. This state of affairs is probably due to the fact that preparation for the existing emergency has had to develop so rapidly that clear-cut methods have not been available. Hospitals with their varied responsibilities and multifold necessities for all types of trained labor are finding it increasingly difficult to maintain their staffs at proper levels. This fact in combination with increased demand for service presents difficulties of considerable proportions. All groups of hospital employees are affected. With tendencies in recent years to employ young individuals, both male and female, the turnover at present in hospitals is exceedingly rapid, due to the fact that these individuals are being taken into armed services and defense industries.

For purposes of developing the subject, the matter of maintaining personnel in the professional departments will be treated first. There are two classes of professional employee principally affected, namely, physicians and nurses. The Surgeons General of the armed forces have agreed with Selective Service officials that interns in hospitals will be deferred for a period of one year. At present reckoning, therefore, hospitals are assured of intern service. Resident physicians of greater than one year's experience, however, will be hard to find after July 1. Local Selective Service Boards, however, have been cooperative, in this sector at least. The Office of Procurement and Assignment should be helpful in declaring certain resident physicians essential.

In those instances wherein the services of residents cannot be obtained, the attending staff members will simply have to assume the duties ordinarily performed by residents.

All hospitals have already felt the shortage of nurses. In some sections, particularly in rural areas, the shortage of nurses is acute.

Efforts at relieving this shortage may be grouped under three headings: (1) utilization of inactive graduate nurses; (2) the training of nurses' aids or ward helpers; (3) utilization of volunteer groups for limited nursing services.

The first method obviously will not completely solve the problem. It is, however, useful in making available nurses of graduate level, who, though not plentiful, represent a trained class and can soon be entrusted with responsibilities of supervisory grade. In the larger communities nursing organizations are appraising the inactive nurse facilities. Older graduates are going back into uniform. Refresher courses have been arranged for these groups, and the response has been gratifying.

The second method, namely that of training women at nursing aid level to aid in relief of a reduced graduate staff, is gaining considerable momentum. In this area the Work Projects Administration has undertaken training programs for this purpose. These classes have been held at three governmental hospitals in the Twin Cities. With the war at its present tempo, it is conceivable that this type of employee will assume some of the duties usually performed by graduate nurses. Graduates remaining in hospitals will act principally in supervisory capacity. Any hospital with its own staff can train these women creditably without use of governmental

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subsidy. A definite course of study, however, should be set up, and instructions should be explicit.

The third source of personnel with some instruction in nursing procedures are the volunteer trainees who are being trained under the direction of the Red Cross. Many women of all communities are anxious to serve in some capacity that is helpful to essential services. These women by proof of actual practice respond quickly to training methods. Classes for these individuals in this area have been conducted by graduate nurses of finished competence in nursing education. Already there is a considerable group of women available for this type of service.

The non-professional classes of personnel also represent considerable problem in the present emergency. The men in these classes of military age are leaving their jobs precipitately and in considerable number. The women are leaving to accept jobs at better wages in defense plants. The problem is not so complicated as with professional classes, due to less urgent need for

prolonged periods of training for these groups. Nevertheless, the turnover in these classes is bothersome. There seems to be only one solution, namely, the employment of older individuals. This procedure is more satisfactory than it may seem upon first glance. There are a great many people in advanced age groups who can handle any specific job creditably. Perhaps more time may be required, but older people are often more thorough and accurate than younger ones. The writer believes the older person quite acceptable for most non-professional jobs. There are also persons available in both sexes with minor physical defects who can perform creditably. This, of course, raises the compensation problem, but there seems to be no avoiding such at present.

In conclusion, it should be stated that the difficulties of maintaining hospital staffs during the present war effort, though troublesome, are not yet insurmountable. There are at least evidences of carefully analyzed effort in the direction of amelioration.

CONSERVATION OF PERSONNEL, SUPPLIES, AND LABOR

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TODAY, every alert administrator is conscious of the problem raised by the necessity of conserving personnel, supplies, and labor in the hospital. Though theoretically such conservation was always accepted policy in every well-run hospital and the desire of every administrator, its practical aspects left much to be desired. It remained for the present national emergency to awaken the interest and coöperation of other members of the hospital personnel and the medical staff in such conservation. All are keen for victory. Now is the moment for the administrator to seize his opportunity and, under the banner of patriotism, do for our beloved country what he has never been able to do for his own peace of mind.

The success of any program in the hospital must begin with a well-defined administrative policy. How shall the administrator build such

a policy on the subject of conservation of personnel, supplies, and labor? There are several sources of help open to him. Naturally, he will have in mind all the pet schemes he has never been able to put across. Lest these ideas be outmoded, he should check them against the current hospital literature. The magazines today are devoted almost solely to articles on the relation between hospitals and defense. Then, there is a wealth of inspiration and sound policy to be gleaned from conferences with other administrators such as this one which Doctor MacEachern has arranged for us today. A third and very fruitful source of knowledge is to be had in contacting the medical staff and hospital department heads and other hospital personnel, both professional and nonprofessional. This contact can be direct and personal or by written questionnaire. The personal approach yields greater returns, but it is so time-consuming that its use is impractical in all but a few cases. Incidentally,

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a trip through his hospital at night with the night supervisor is an eye-opener for most administrators. Finally, the administrator will need to organize and coordinate the information gained from all these sources into a definite policy of conservation for his own institution. Fortified by his own clear thinking, he will be ready to set up the conservation program and put it into execution.

The first step toward effective operation of a conservation program would appear to be a conference between the administrator and a very limited number of key people in his institution. Small numbers conduce to informality and hence freer expression of opinions. At this conference the administrative policy will be discussed and probably modified as newer, better ideas are presented. Tentative plans for practical application of the program will be advanced, discussed, rejected, or accepted.

The next step will be a full conference of department heads. Again the administrative policy will be set forth, as well as such plans for execution as were drawn up by the first group. If the subject of the conference has been included in the call to the meeting, the department heads should be ready to advance many ideas for the development and execution of the program. Before this group adjourns, the final outline for the enforcement of the hospital's conservation program should be drawn up. Care must be taken to avoid overlapping and duplication of effort and to assign definite responsibility for each phase of the program. A copy of the outline in writing should be available to each department head as soon as possible after the meeting. Upon receipt of this instruction sheet, each department head should call a meeting of the personnel of his department to acquaint them with the plans of the administration and enlist their enthusiasm and support. The best psychological approach with this group will undoubtedly be the patriotic theme.

That this paper should bring to you some worth-while ideas on this subject of conservation and not be a mere recital of what you all know better than I, I have sent out a number of questionnaires. One group went to administrators throughout the country, and their response was gratifying. Another different group of questions I gave to the medical staff of our hospital and

still another to the department heads and all other personnel. The doctors were interested and gave many good suggestions. Because there was no verbal explanation given to the nonprofessional personnel, the percentage of response was not high. What follows in this paper is the result of information gleaned from these questionnaires.

Personnel

Intern Shortage.—Have doctors assist each other at operations.

Give interns stenographic help. Volunteer stenographers may be so used. Dictaphone equipment helps.

Instruct nurses to do some procedures now left to intern.

Nursing Shortage.—Check all procedures to eliminate the unnecessary and "streamline" the remainder.

Eliminate luxury services.

Where teaching facilities are available, enroll more students.

Neighboring hospitals might share instructors.

Use Red Cross Nurses' Aides, WPA and NYA Hospital Aides.

Use older nurses; if home duties prevent full time work, arrange their schedules accordingly.

Distribute hours for operations so less personnel is needed.

Labor

Absorb labor that can serve in hospital duties but is unable to serve industry.

Use labor-saving devices when possible, such as ice machine; candlewick spreads which save mangling.

Employ more workers from the older age group, thereby reducing turnover.

Pay adequate salaries to hold efficient workers, and let inefficient go.

Have department heads study over-lapping of duties and waste motion in their subordinates.

Have department heads draw up a simple but inclusive procedure for each job to insure continuity of efficiency in face of more rapid turnover. Each new worker can be given a copy of the procedure and held strictly responsible for following it.

Save time for new employees by labeling doors they must find.

Supplies

Electricity.—Keep window shades rolled to the top to save electricity.

Remove bulbs to prevent the use of unnecessary fixtures.

Put up a notice near light switches, "Turn Off Expenses." Make a cartoon of it.

Study your electric power to learn the time of the "peak load" (usually 8-10 a.m.). Try to divert this; e.g., by baking in the afternoon.

The electric power in some passenger elevators does

MEETING INCREASING COSTS—STASEL

not shut off automatically when the elevator is not in use. Therefore, be sure the switch is turned off.

Use lower watt globes in some places and fewer globes of greater power in others. Two fifties give better light than four twenty-fives, and globes are saved.

Linen.—Avoid unnecessary draping for minor surgery.

Discontinue ether socks and pneumonia jackets.

Have patients bring gowns, pajamas, et cetera.

Don't be so generous with linen.

Study laundry procedures; 75 per cent of wear and tear of textiles comes from laundering.

A study of gauze consumption will show many possible savings. Fewer layers of dressings and smaller sizes. Not all need be sterile.

Office Supplies.—Use both sides of all chart forms.

Use backs of letters or scratch paper for carbon copies.

Cut off the top of carbon paper and thus prolong its life because keys will strike unused portion.

Use one paper towel rather than two.

Check paper-cup dispensers to see that only one cup is released at a time.

Require return of stub pencils before giving out the new.

Check the floor for rubber bands and paper clips each night.

See that nurses do not waste chart paper by writing in headings on sheets that are not used.

Write shorter letters; use narrow margins.

Wash steel pen points daily to prolong life.

Food.—Hospitals in rural areas should do more home canning.

Study diets with a view to simplification and curtailment of special diets ordered.

Require the restriction of certain food items such as sugar, pineapple, tuna fish.

Stop serving scarce and imported foods. Use more of the extra standard rather than so much extra fancy canned foods. Food value is the same.

Pay more attention to patients' tastes; e.g., don't serve cake on tray of patient who has said he never eats it.

Other Supplies.—Hypodermic needles can be resharpened by hospital personnel and re-used.

Hems of old sheets make good T binders.

Hand powder used in the operating room can be salvaged and sterilized for repeated use.

Regulating faucets in operating and delivery rooms to run a smaller stream during scrubbing saves water.

Finally, there are a few general principles which apply to any conservation program. For example: cut down on amounts requested in order to make the personnel more economy-conscious; keep prescriptions down to minimum practical amounts; have rigid issuance of all supplies by means of requisition. In conclusion, now is the time for the administrator who really wishes to have an effective conservation program to consider the installation of a perpetual inventory of all supplies—if he has not already done so.

MEETING THE INCREASING COSTS OF HOSPITAL SERVICE

A. G. STASEL

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Minneapolis, Minnesota

THE need for national economy as an aid to the United War Effort is no longer a figure of speech, but a thing of reality. Time, effort and supplies are the factors that will tip the scales of justice. Economics, large or small, whether effected in the home or hospital, lend their weight to this united effort. We must *all* be economy-conscious at all times no matter what our relationship to the hospital.

War brings with it economic and social adjustments which must be recognized whether we individually wish to or not. Increased payrolls

and increased commodity costs are already with us to a considerable degree and greater increases are ahead of us to an extent, in all probability as great as we have already had in the past six to eight months. The reasons for these increases are quite obvious. Will these costs recede after the war? They no doubt will to some extent, but we will not be back on the old basis. This was true of the first World War and will no doubt be true of this one. We hospitals cannot escape the implications of a changed economic and social world. The influences of social security, forty-hour weeks, higher wages, inflation, will all affect hospital costs, either directly or indi-

Read at the War Session of the American College of Surgeons, Minneapolis, Minnesota, May 1, 1942.

rectly, and the increased costs we are now faced with will no doubt be permanent to a very great degree.

How are we going to meet these increased costs? The easiest way, of course, is to increase our rates for various services as such costs increase. And this becomes an absolute necessity if the Voluntary Hospitals are to survive. Increases in rate structures may be approached on a permanent basis by increasing all charges on a "dollar-wise" basis, or on a temporary basis by increasing all charges on a "percentage-wise" basis. This latter basis has been called by one hospital association "a defense surcharge." The latter basis, namely, percentage-wise increase, carries with it the implication of being tied up with the war emergency and as a matter of good faith will be removed when the need therefor has been removed. We hope this is so.

Hospital Administrators should make themselves very familiar with their costs in all departments of the Hospital and should check these costs, under present conditions, almost weekly or at least monthly and should see to it that the hospital is properly reimbursed for services rendered. This does not preclude charity where charity is deserved. Insurance cases should be paid for on a full per capita cost basis and not less. Hospitals cannot subsidize any insurance or compensation cases. This is also true of Group Hospitalization cases as well. Dr. Fred Carter, when president of the American Hospital Association, gave us a word of caution in this regard when he said "In communities where active service plans are operating, the hospitals are becoming more and more dependent upon them for payment for services rendered. . . . as the movement grows, and the proportion of hospital income from this source increases, the per capita income of the hospitals tends to become fixed at a level which, in many instances is somewhat below per capita costs. In the meantime the per capita costs may increase and the disparity between the two may prove ruinous to the financial structure of hospitals. This situation becomes doubly serious when we stop to realize that many of those who formerly constituted our paying clientele, upon whom we depended for certain profits to offset losses on free and part-pay work, now come to us as subscribers to hospital service plans. In the face of such facts it becomes obvious that unless the plans make every

effort to keep their per diem rates to hospitals at levels approximately equal to per capita costs, the hospital in order to avoid embarrassment may find it necessary to devise services to sell down to a price instead of up to a standard." This principle is more important now and in the future than ever before. Our Voluntary Hospitals have been pretty proud of their tradition of services to all classes in the community. The extent to which our hospitals render community service as distinguished from self-supporting service varies of course, but if community service becomes too low or vanishes, the distinctive status of our Voluntary Hospitals, as well as their immunities, will be in peril. With the disappearance of gifts, endowments and the like, it becomes more necessary than ever that these sources of income pay their way in full, in order that in turn our social obligations or charity services to the community may be met. Our very existence is contingent upon this principle.

The time has come in hospital administration when we must think in "stream-lined" terms. Co-operative effort within the institution, as well as between the institutions in the same locality, is now fundamental, for it is only through this co-operation within and without that hospitals will survive the trials and tribulations which they now face and will face for some time to come.

For the past few years we have become soft and self-satisfied. From now on we must do a better job—or else. We must now become penny-wise if we are to carry on in a successful way and save dollars. The secret of successful operation of an acute hospital is in "turn-over" and not in occupancy. The faster the "turn-over" the greater the per diem income. There is not a need as a rule for more acute beds in a community, but there is a great need for more sub-acute beds at lower cost.

I have mentioned that the easiest way to meet increasing costs is to increase rates, which is necessary, of course, to a certain degree. This is the solution to only part of the problem, however. Increasing rates without doing a better job of collections gets us nowhere. Why not think, therefore, in coöperative terms (particularly in larger communities and this may be applied state-wide as well) and consider the establishment of a centralized credit and collection service for hospitals, together with a financing bureau to assist those who need this service.

Group Hospitalization has helped in this regard but we still have the major problem with us. Experiments to this end in other communities have reduced collection costs by one-half and increased the working capital of the hospital thereby. Why not here? We can do a better job through coöperative effort.

Let's look at the other side of the question, that is, the cost side of our hospitals and what can we do to meet rising costs in a better way.

We all take care of patients and the fundamental problem here is, for all practical purposes, the same.

Why don't we standardize our intra-hospital history forms and use the Monolithic Method of printing as is now the custom with large users of printing, such as insurance companies, etc. We can reduce our printing costs 40 to 50 per cent in this way.

Why not centralize our major purchasing problems? With the complexities of priorities, new processes and substitutions, we, all of us, are more or less in a whirl. Big business has recognized the advantage of pooled purchasing; the state of Minnesota is doing it at a big saving. Our hospitals—combined—is big business. What is wrong by saving 10 to 20 per cent in this way?

A centralized employment bureau serving our northwest area would go a long way towards not only stabilization of employment and reducing turn-over, but would again result in considerable savings to all of us.

Central schools of nursing for theoretical instruction developed by zones instead of by individual hospitals would definitely reduce costs of nursing education.

The present nurse shortage is to some extent our own fault. We shall get nowhere by "crying over spilled milk." It is now clear to most of us that we shall have to do without all luxuries and many so-called necessities for the duration of the war and that a great many comforts will have to be rationed or should. Special nursing will come within this category. Hospitals and the public must be relieved of the expense of maintaining Graduate Nurses or special duty nurses when such nurses should take their places on permanent payrolls and spread their efforts in the care of a larger number of patients. A distinction in the care of the acute as against the subacute patient should now be recognized. Judicious use of the Volunteer Nurse Aide, as well

as the Trained Aide, will, of course, be of considerable help. We need many kindly and intelligent hands for the bedside care of the patient and these can be obtained if we will use a little common sense and work together for it.

Let us consider some of the economies that are seemingly small, but are necessary at this time and which are all around us if we keep our eyes and ears open and become truly economic conscious.

In reading a recent copy of *News-Week*, my attention was called to an item of suggested economy by the American Institute of Laundering, which suggested that diners lean well over the plate while eating to prevent spots on the table cloths. The saving of laundry wear and tear is considered more important than good table manners now that impending shortages of textiles threaten the supply of table linen. Suggestion: Analyze your linen usage at its source. School your organization in linen economy. The results obtained will be worth the effort.

Food costs are mounting. Can anything be done about it? Yes, analyze the food service. Do you serve too much sugar, butter, bread, potatoes, meats on trays that later come back to help fill the garbage cans? Garbage can inspection is a regular procedure in Army Hospitals to check against waste. Why not in the Civilian Hospital? If our hospital administrators would do this only once in a while, they would learn considerable about food waste. Then there is food substitutions which an alert Dietetic Department will carry out in these times without anyone noticing any change, except that perhaps the Hospital Administrator subsequently wakes up to the fact that this food budget perhaps has not gone up as fast as others he knows about. Food cost consciousness through an educational program throughout our respective organizations will also help reduce food waste.

When considering drug, medical and surgical costs, substitutions are perhaps limited and yet if we keep our medical staffs conversant with costs from week to week, I am sure we can count on their support in keeping ultimate case cost in line. Again education as to rising costs will reflect itself in economies.

The use of electric lights and power unnecessarily has been a bug-bear to all of us at all times. Why not have the following notice print-

PRIORITIES AND OBTAINING HOSPITAL SUPPLIES—WATSON

ed and placed on every light switch to make us all conscious of this cost?

NOTICE

In coöperation with the United States National Defense Program we are asking everyone to conserve electricity by making sure that all lights are out when not needed. Uncle Sam needs power.

Let's Help Him

General Maintenance costs can be reduced. Our painters, electricians, carpenters and mechanics appreciate attention to their needs. If we, as Hospital Administrators, show a real interest in their work and accomplishments, we can rest assured our maintenance departments will respond whole-heartedly to our desires for a real war economy. They will appreciate the responsibility.

Many other economies are obvious to most of

us, such as in the matter of rubber gloves. When worn out the fingers may be saved for finger cots and the balance cut up for rubber bands. Scotch tape may be often substituted for cloth tape. Rubber sheets should be guarded. They are now worth their weight in gold and you may have to turn in an old one to get a new one before long. Regular inspection of equipment in each department should result in definite economy.

Save everything—cans, drums, barrels, rags, rubber goods, paper. Have some central place where these items can be collected or sold. It all helps in this all-out war effort.

We are a nation at war—a war that none of us desired or like. It is difficult to realize that scarcities face us on every side, but our fighting forces must come first. So let us all "tighten our belts" a little more. Our present economy program is a "must" program if we are to survive.

PRIORITIES AND THE PROBLEM OF OBTAINING HOSPITAL SUPPLIES

ROY WATSON

Rochester, Minnesota

I SHOULD like to compliment Dr. MacEachern for arranging this timely meeting. The present emergency is presenting so many new problems, that I am sure all of us can benefit from these informal discussions although because of rapidly changing conditions what we discuss today may be out of date tomorrow.

As you know, hospitals have been given the privileges of two ratings—the A-10, P-100 blanket priority rating, and the PD-1-A rating.

The A-10 rating has been granted for maintenance, repair, and operating supplies. Its use does not require special permission from the War Production Board. If your supplier requests a priority rating, the procedure is to write on the purchase order or in an accompanying letter as follows: "Material for maintenance, repair, or operating supplies under rating A-10 on the Preference Order P-100 with the terms of which I am familiar." The order must be signed man-

ually by an officer or authorized executive of the hospital.

In view of the large number of industries that are being placed under these ratings, it remains to be seen how much help they will be to hospitals. However, since hospitals are definitely necessary to public health, there is a possibility that they may eventually receive a higher rating, as did the public utilities a few weeks ago. For this reason, I urge that hospitals do not abuse A-10 or mis-state their requirements, for if this rating is violated, they may jeopardize their chances for a higher rating or lose it entirely.

The PD-1-A rating is for improvements, additions to buildings, or new equipment. Application must be made to the nearest branch office of the War Production Board for triplicate forms and instruction sheets. After completion, these forms must be sent to the Director of Industry Operations at Washington. They must specify the latest date on which the items requested can be delivered to fill their purpose. If the request is approved, a specific rating for a specific purpose

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The author is President and General Manager of the Kahler Corporation at Rochester, Minnesota.

JULY, 1942

is given to the order and two forms are returned—one for the hospital's files and one to be given by the hospital to the supplier. In this connection, it should be borne in mind that certification by WPB covers only the specific items requested and has no bearing on future orders.

Cases will probably arise when there will be questions as to which rating to use. My suggestion is that in all cases, except those involving a new building, that the hospital try the A-10 rating first. If this rating does not enable the supplier to handle your order, then try PD-1-A.

The problem of obtaining hospital equipment, furnishings, and supplies might be summarized in a general statement to the effect that everything will become increasingly difficult to obtain and that higher prices are certain. No doubt all of us have already experienced this definite trend, whether we have been trying to purchase linens, canned food, furniture, or operating room drugs. Furthermore, I am confident that many more government controls and rationing plans will soon be in operation. As a result, and despite our priority rating, we will have to try to find new sources of supply for the things we need, and we even may have to purchase through retail channels. The manufacturers' and jobbers' stocks will necessarily be depleted first, and in many cases when these stocks are gone, there will be no materials available for replacement or new manufacture. This also will mean that we will have to either go without certain supplies, get along with what we are now using, or use substitutes. However, while I think that shortages will become much more acute than many of us realize, I believe that enough supplies, such as gauze, drugs, syringes and needles, instruments, sutures, and like items will be available to hospitals in small quantities to enable us to function—but not to operate "as usual."

For the past several years a committee of the American Hospital Association has been work-

ing with the United States Bureau of Standards on the problems of standardization and simplification and has done a very good job. It seems to me that now is a very appropriate time for hospital superintendents and medical directors to analyze their situations with respect to standardizing both equipment and supplies in their various departments. This simplification will tend to reduce the number of items bought, and in many instances will enable hospitals to purchase the accepted articles in sufficient quantities to reduce the unit price. Inasmuch as a later speaker will discuss the very important subjects of conservation and economies, I merely wish to call this program to your attention so that you may capitalize on the efforts of this committee.

I might also suggest that the members of the various state hospital associations send to their secretaries a list of the excess used or unused equipment or supplies which they might have in their storerooms, attics, or basements. I am sure that many of us have furniture, kitchen equipment or supplies which we will never use but which might be serviceable to some other hospital. The secretaries then could publish such lists in special bulletins so that the information would be available to all members. This procedure is being followed with considerable success by the Educational Buyers Association and has made available several items of equipment which cannot be purchased on the market.

May I again stress the importance of not abusing our priority ratings and of doing everything possible to preserve the life of our present equipment and supplies. Procurement in all lines will become much more difficult, and superintendents and purchasing agents are being challenged to locate new sources of supply and substitutes, and to develop new techniques in operation.

The gap between proven knowledge and effective action based on that knowledge is nowhere more glaring than in our fumbling efforts at control of the most common of the infectious diseases.

We know that the time lost from the common cold would build hundreds of the planes we now need so much. Yet, the simple prophylactic measure of isolating all those with colds in early stages is applied routinely to a few school children only.

This failure to coordinate knowledge and action is also all too common in our efforts to control and eradicate tuberculosis.—*Tuberculosis Abstracts*, April, 1942.

A STUDY OF OSTEOPOROSIS BY MEANS OF CONTROLLED X-RAYS OF THE BONES

Part I—Method

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IN 1933 the author called attention to a group of patients with gastro-intestinal complaints who had a definite osteoporosis of the bones (hand and wrist), when compared with normal subjects of the same sex who were used as controls.¹ The difficulty in using this technique depended upon the fact that the same normal controls were not always available for comparison. We have, therefore, worked out the following new method.

Normal subjects in perfect health and free from all abnormal symptoms have been filmed, using a series of exposures which differ from each other by that exposure necessary to penetrate 0.5 mm. of aluminum. The exposures are measured by means of an aluminum ladder (Fig. 1) placed on the cassette at the time of the exposure. This aluminum scale varies in thickness, from 2.0 mm. to 5.0 mm. The exposures, therefore, for this series, called the "master control series," are equivalent to penetrations of 2.0, 2.5, 3.0, 3.5, 4.0, 4.5 and 5.0 mm. of aluminum respectively. The resulting films vary, then, from those which are definitely under-exposed to those which are over-exposed. The variable is the time of exposure. The rest of the x-ray technique including distance, voltage and development, is constant. Several "master control series" have been made varying according to age, sex and activities of the normal.

When the unknown patient reports for examination, the hand and wrist along with the aluminum scale are filmed. For purposes of interpretation the scale on the unknown film is compared with the scale on the control film so that the two scales match perfectly in density (Fig. 2). This records the difference in density of the bones between the control and the patient, thereby giving definite information as to the presence of osteoporosis. Then the densities of the bones, control and unknown, are matched as closely as possible, and, if the difference of alumi-

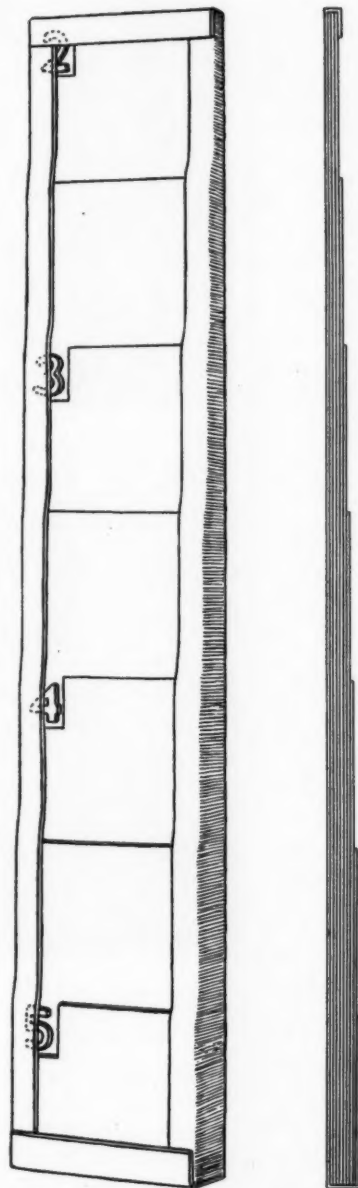


Fig. 1. A semi-diagrammatic sketch of the aluminum ladder. The figures indicate the variations in thickness in millimeters.

We are indebted to Mr. Carl Reed, of the Pengelly X-ray Company, for the suggestion as well as the construction of the aluminum ladder.

OSTEOPOROSIS—GARDNER

num penetration is only 0.5 mm., the osteoporosis is graded 1; if 1.0 mm., graded 2; if 1.5 mm., graded 3; and 2.0 mm., graded 4.

ucts in the diet very frequently show osteoporosis. This is especially true when the water is "soft" and free from calcium or when so-called "alkali

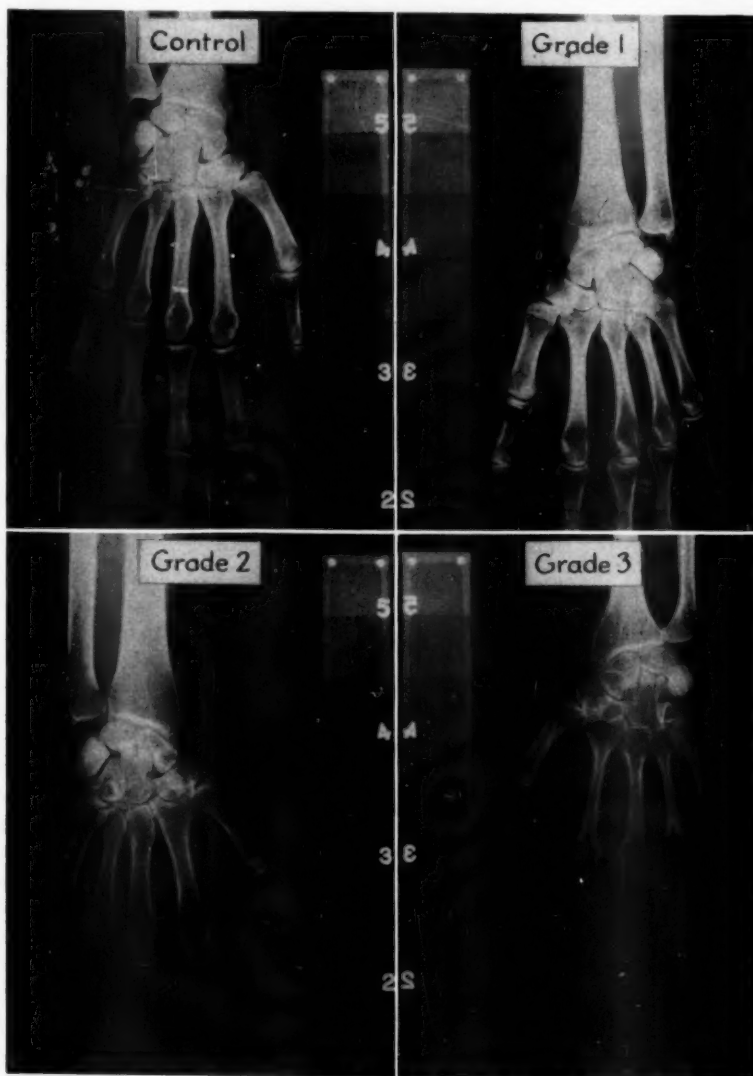


Fig. 2. X-rays of the bones of the hand with the aluminum ladder in place. These show equal densities of the aluminum ladder, and the variations in bone density in the Control, Grade 1, Grade 2, and Grade 3 osteoporosis.

Results

1. An osteoporosis equal to grade 1 is not uncommon in healthy people. There is very little difference between the right and left hand. If osteoporosis is present in the hands and wrists, it will also be found in the jaws, spine and pelvis.

2. In this geographic area (Minneapolis and Saint Paul) people who do not use dairy prod-

water," containing excess magnesium, is used.

3. This technique for the determination of osteoporosis has been invaluable for diagnosis of probable mineral depletion and also for the determination of the value of therapeutic procedures for restoring normal bone densities.

Reference

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PRESIDENTIAL ADDRESS

HERBERT Z. GIFFIN, M.D.

Rochester, Minnesota

MY presentation will be partly a report of my activities and partly a discussion of some, and only some, of the aspects of the medical situation. Following this I shall present a concrete suggestion for future investigation.

From the time of the 1941 meeting to January 1, 1942, I traveled, usually with our former president, Dr. B. J. Branton, sometimes alone, to meetings throughout the state in order to emulate my predecessor, to become better acquainted, to transmit the policies of the Council and the House of Delegates, and to obtain the opinions of members of the Association. In the six months since January 1, I have traveled several thousand miles to medical meetings, committee meetings, and meetings of allied societies. This has meant an average of two meetings a week. The work has been different and not especially difficult. It has been pleasant and stimulating although I have had misgivings with respect to my effectiveness.

The president can accomplish nothing alone. The councilors and other officers of the Association can do very little by themselves. The first essential to an active and effective Association is an efficient administrative staff which fortunately we do possess. Most important, however, to a program of advancement and expansion are active committees, and an essential of an active committee is a well informed and enthusiastic chairman. It is only through committees that our work can be effective. The time has passed when a chairman may say without embarrassment, "Your committee has had no meeting during the year." It is not necessary for me to rehearse the projects of our committees. You have had their reports and have been informed of their activities during the year through miscellaneous publications, *News Letters*, and *MINNESOTA MEDICINE*. We all know of the national recognition which has been given to the work of some of our committees, and I am glad to say that all committees of the Association have concrete plans for the future. Let us continue to support them in their work. Members of these committees give time

and effort gratis and they should be encouraged at every opportunity.

I shall discuss, first, certain impressions which have been obtained. It is an outstanding observation that physicians everywhere, especially general practitioners, are eager to learn. They travel long distances to attend meetings, postgraduate courses and clinics. They read the journals and can ask embarrassing questions. They appreciate the information obtained from the Packet of the Month. They appreciate the excellence of our sectional and state meetings and many of them attend meetings of the national societies and sit for hours to learn of the latest procedures. It is therefore clear that postgraduate instruction of all types should be continued and, if possible, expanded even during the war period. I believe we should follow the principle of having postgraduate education provided almost entirely by facilities within the state in order that it may be on a permanent and continuing basis. It is possible that the staff of every larger hospital of the state can arrange for at least a few clinic days during the year. Undoubtedly the education of specialists will suffer during the war because it will not be possible for so many of our physicians, except those physically disqualified for military service, to spend three years or more in graduate work, and for this reason again postgraduate education should be encouraged.

I have, of course, found that physicians are concerned and perplexed with respect to the workings of the Procurement and Assignment Service and the advisability of applying for commissions. During the year the situation with respect to the supply of physicians to the various services has become clarified and we now know where we stand. We at last realize that the situation is exceedingly serious and that both voluntary enlistment and recruiting through Procurement and Assignment are absolutely necessary. The number of physicians needed is much larger than was anticipated. Approximately twenty thousand physicians are in the various services now and it is estimated that three thousand a month will be needed in the future. By 1943 there should be forty thousand physicians in the various services. There are about 180,000 physicians in the country of whom probably 160,000 are active. This

Presented at the eighty-ninth annual meeting of the Minnesota State Medical Association, Duluth, Minnesota, June 28, 1942.

means that by next January one doctor out of every five will be in service; in other words, there will be one physician in service for every four at home. It also means that more than half, possibly two-thirds, of those who are physically qualified and less than forty-five years of age will be in service.

Recently medical recruiting offices have been set up near the offices of the state medical associations to work in conjunction with the Procurement and Assignment Service. These recruiting offices select physicians who have volunteered through Procurement and Assignment and pass upon their qualifications. The names of qualified physicians are submitted to the Procurement and Assignment Service for determination as to whether or not they are regarded as essential men in their communities. The recruiting boards pass on the qualifications of the volunteers but their availability is decided by the Procurement and Assignment Service. The activities of the medical recruiting offices, with elimination of red tape, have speeded up the commissioning of physicians for the Army. Minnesota has done well—more than 500 of our 3,000 active physicians are in service. However, in spite of the activities of the Procurement and Assignment Service and the medical recruiting offices, more physicians are needed. No other profession or group has been given the privilege of selecting its own members for service, and if we desire to avoid dictatorial federal policies with respect to the recruitment of physicians, it is absolutely necessary that we do our part in making the Procurement and Assignment Service a success. This means that each physician who is physically qualified must seriously consider his own situation and decide honestly and patriotically his duty in the circumstances. If Procurement and Assignment fails the proponents of state medicine will have a pretty feather in their cap.

Another observation of an interesting and somewhat amusing nature concerns itself with the attitude of older physicians in relation to the war effort. Older men resent not being able to go into service. Physicians less than thirty-seven years of age are wanted. Those less than forty-five will be accepted and given commissions. But only in instances of most unusual special qualifications will men more than fifty-five years of age be accepted at all. Yet the older physicians are most patriotic and it is difficult to convince them

that they should not be accepted for commissions. Nevertheless, the older physician, who in many instances thought that he was of no more use in the world, suddenly has come to realize that he is a very valuable and necessary asset, that he can return to practice if he has retired, that he can take on the teaching position of a younger man, that he can again expand his practice, and the psychologic effect of all this is resulting in an improvement in health. Dr. Lahey at the recent meeting of the American Medical Association stated that he was happy to say that in spite of his strenuous year as president he was in better health than formerly. I wonder if the incidence of coronary occlusion and other serious vascular disease among older physicians will be reduced in spite of increased activity during the period of the war. If so, a new treatment for age has been discovered! Let us then propose a toast to the continued health and activity of our older physicians. They will do more for the country in civilian life than many a younger man.

Another topic of interest to the practitioner is the foreign graduate or so-called refugee physician. In this state refugee physicians have not been accepted by the State Board of Medical Examiners. The requirements for licensure are variable in the different states. The criteria set up by the Army Medical Corps for foreign graduates are rigid. A foreign graduate must be a citizen of the United States; he must have had a premedical education equal to that required for our approved medical schools; he must have a medical education of four academic years; he must be licensed in the country where his school is situated, and he must have had a year of internship; his qualifications must make him eligible to take the examination of the National Board of Medical Examiners and he must have a license to practice in the United States. Few foreign applicants can obtain evidence of these qualifications. No one can say at present whether the demand for physicians in civilian practice will make it necessary for the State Boards of Medical Examiners to revise their requirements or not. However, I am sure it is the sentiment of physicians in this state that as long as it is possible to do so our own physicians will make a very strenuous effort to take care of the civilian population.

Osteopaths have been accepted only as enlisted men but after training they may apply for service

in connection with hospital units but as enlisted men only. Congress made it permissible for the Army Medical Corps to accept osteopathic physicians, leaving the decision, however, in the hands of the Surgeon General, who for various well founded reasons has declined to give them commissions. Among other things, the Surgeon General states that he "is charged with the preservation of the physical well-being of the military forces and that this responsibility cannot be discharged in the absence of fixed standards of preventive measures, diagnostic procedures and curative therapy, and that these standards are found only in the school of regular medicine."

Next, I would like to discuss the situation of those of us who stay at home. We must of course care for the civilian population. This requires adjustment of our methods of practice, care of patients in areas where physicians are absent, elimination of inefficiency and useless waste, increased activity of older physicians, and return to practice of some of those who have retired. But it is self-evident that war is destructive; destructive of human lives, destructive of materials, of historical records, of art, of culture, of education. Yet the maintenance of as much culture as possible is essential—essential to recovery after the war. Consequently the duty of those of us who stay at home is clear. Outside of practice we must do our part to maintain the standards of medical education and, as far as possible, the standards of research. We must perfect the organization and coördination of all agencies concerned with health and medical care and even expand these activities where possible, looking forward to the necessities of peace. We must support in every way possible the colleges and universities, the medical schools, and scientific and humanitarian societies active in education and research. There can be no greater service than doing our part in maintaining the institutions and cultural activities of peace in order that there may be as sound a foundation as possible for recovery following the war. It is the history of war that that country recovers quickest and to the greatest degree, whose cultural foundation has not been destroyed and whose great men have not been throttled.

But these remarks are of a general nature. Is there anything more specific which should be proposed? We are expanding our campaigns in nutrition, vaccination and immunization, tuber-

culosis, child health and industrial health. Heart disease of children is under survey. Public health education is being carried on in an active manner. The medical setup for civilian defense is being organized slowly but satisfactorily. For the present it is recognized by those who are responsible that the most important portion of the civilian front is the industrial front and the problem of supplying medical care for both small and large industrial plants is being attacked vigorously. For the future it is clear that our greatest expansion should be in preventive medicine and in child health in coöperation with the State Board of Health and the Division of Social Welfare, that the next generation may be superior in every respect for reconstruction after the war.

Is there any other phase of medical care which should be studied? I have one concrete suggestion. For years the public and physicians have discussed the cost of medical care but, as far as I know, no state medical association has attacked the problem of useless waste in medical practice. Is it not timely when efficiency and economy are so necessary on account of war, to initiate a detailed study of this question and, when peace comes and the cost of medical care again becomes a major topic, to be prepared to provide a high standard of medical care at less expense, if possible, to hospital, physician and patient?

In looking over the literature on waste in medical care or, if you prefer, economy in medical care, I find many articles on hospitals—the folly of building overly expensive and ornate hospitals, the necessity of the utilization of a higher percentage of hospital beds, the need for studies in each community before enlarging hospital facilities, and numerous articles on the details of economy in hospital management. By marked contrast I find only two recent articles on waste and economy in medical care; one is entitled "Economy in Medication" and the other "Why Waste the Patient's Money on a Complete Blood Count?" It is clear that we need information on the useless tests which are being done in hospitals, partly because the chief may ask unexpectedly for a certain test which has not been obtained; also on the unnecessary and expensive prescribing of new and untried drugs, especially at this time, of vitamins, on waste in dressing room supplies, and the unnecessary duplication of various types of equipment. Recently at the meeting of the Minnesota Hospital Association I viewed an exhibit

on waste in hospital supplies. I cannot go into detail but damage to rubber, extension cords, burners, laundry, rugs, bedding, was demonstrated. It was shown that washed gauze is usable and less harsh than new gauze. Materials collected from laundry chutes were exhibited. In 1941 in one hospital more than 18,000 pieces of glassware were broken.

While the question of waste and economy in medical care has concerned me for a year or two, this exhibit focused attention on the subject again. I am sure that if such a study can be properly carried out many things of practical value to all of us will be disclosed. It will take at least a year or two of investigation and study. Our findings will necessitate later, if not now, a coordinated study by other groups: the university medical school, the hospital association, the nurses' association, and the pharmaceutical association. I grant that it will be difficult to find physicians qualified for such a task. Moreover, they would need assistance from laymen trained in efficiency and administration. It will be nec-

essary first to find an interested, willing and enthusiastic chairman and to give him the major responsibility of selecting the personnel of his committee and his assistants. I hope that this suggestion will be referred to the Council for their opinion.

And now I come to my valedictory. Although I am still granted six months of official life as your president, I shall have no other opportunity to express to you my deep appreciation of the honor you have conferred on me. My sense of appreciation is embellished by a firm conviction that the most gratifying factors in the life of a professional man are the companionship, tolerance and esteem of his fellow practitioners. As confrères, let us overlook each other's shortcomings and magnify each other's good qualities that we may work together to the honor and the progress of the medical profession. And in this war emergency, in the words of President Hutchins of the University of Chicago, "What can I do but ask you to lift up your hearts, and face the future with the fortitude becoming to educated men and women?"

SULFA DRUGS CAUSE THYROID ENLARGEMENT

Enlargement of the thyroid gland in the neck and a decrease in its activity are caused by the sulfa drugs, Dr. Julia B. Mackenzie and Dr. C. G. Mackenzie, of the Johns Hopkins School of Hygiene, have discovered in studies of rats, mice and dogs.

Sulfaguanidine, sulfadiazine, sulfapyridine and, to a lesser extent, sulfanilamide, all caused the thyroid gland enlargement. Another sulfur-containing chemical, thiourea, had the same effect to an even greater degree. In the case of rats given sulfa drugs, the enlargement of the gland was accompanied by a decrease in its activity, as indicated by lowered basal metabolic rate.

The enlargement of the gland as a result of sulfa drugs was prevented by doses of thyroxin, the hormone produced by the gland. Iodine, however, which the gland requires for manufacture of its hormone, did not prevent the enlargement due to the sulfa drugs.

Whether the sulfa drugs prevent the formation of thyroxin by the gland or whether they destroy it after it has been produced is not yet known.—*Science News Letter*, April 25, 1942.

ARTHRITIS NOW LINKED TO RHEUMATIC FEVER

Evidence that chronic infectious arthritis in adults may have resulted from rheumatic fever in childhood was given the American Association of Pathologists and Bacteriologists by Dr. Archie H. Baggenstoss and Dr. Edward F. Rosenberg of the Mayo Clinic.

The two Mayo physicians felt that arthritis involves more than disease of the joints; that it involves the vital organs, the crippled joints being merely one expression of the malady.

They examined the organs of thirty patients who had had chronic infectious arthritis and found evidence of disease in the heart, kidneys, liver and other organs. There was damage to the heart in twenty-four cases and in sixteen of these the injury was indistinguishable from that caused by rheumatic fever. Also significant was the pathologic condition discovered in the kidneys. It was felt that heart and kidney damage was due to the same underlying set of causes.

Drs. Baggenstoss and Rosenberg concluded there may be a relationship between chronic infectious arthritis and rheumatic fever, typically a disease of childhood.—*Science News Letter*, April 25, 1942.

CLINICAL-PATHOLOGICAL CONFERENCE

MINNEAPOLIS GENERAL HOSPITAL

Frank C. Andrus, Pathologist

Presentation of a Case

DR. MOOSNICK: The case was that of a sixty-one-year-old white male who was admitted to the hospital on May 6, 1942, and who expired on May 28, 1942. The patient stated that he had had swelling of the abdomen and ankles for two weeks and had experienced epigastric pain and anorexia for the three weeks prior to admission. The epigastric disturbance was not severe but was annoying and came on shortly after eating. He thought that he received some relief by taking soda. He also experienced some difficulty in breathing. He said that his urine had become dark in color and he described it as bloody. There were no frank blood clots, however. He had no other genito-urinary symptoms. The past history was not remarkable except that the patient had drunk about one quart of whiskey each day for many years.

Physical examination at the time of admission to the hospital revealed a well-developed and well-nourished man. His blood pressure was 140/80. The abdomen was distended and a fluid wave was present. Several spider-web angiomas were present over the left upper chest and the left shoulder. The pupils were regular and even and reacted to light. The skin and sclerae were definitely icteric. Crepitant râles were heard over the bases of the lungs. The cardiac dullness was enlarged to the left on percussion. No other significant cardiac findings were noted. The ankles showed a one plus pitting edema. The impression at the time of admission was portal cirrhosis, with ascites.

Laboratory examination revealed the hemoglobin to be 68 per cent, the leukocyte count was 7,000, the average mean diameter of the red cells was 7.9 microns. The urine was dark brown in color and had a specific gravity of 1.027. It contained a faint trace of albumin, one plus urobilin and a trace of urobilinogen. There was no bilirubin in the urine. The blood urea nitrogen was 23 mg. per cent, cholesterol was 222 mg. per cent, the icterus index was 24. The direct immediate Van den Bergh was 4 plus and the direct delayed 3 plus. The plasma proteins were normal. The vitamin C level was .15 mg. per cent. Abdominal paracentesis was performed and two gallons of bloody fluid were removed. A bone marrow biopsy was performed but did not reveal any characteristic pattern. A barium enema examination revealed diverticulosis of the colon but was otherwise negative. Gastro-intestinal x-ray studies were likewise negative. The stools contained gross blood. A

peritoneoscopic examination was performed and tumor nodules were thought to have been seen on the peritoneum. The patient was placed on a high carbohydrate diet and given fluid and supportive treatment, but he did not respond well. He became stuporous and finally developed signs of hypostatic pneumonia and expired on the twenty-second hospital day.

DR. ADKINS: Was there much peripheral edema?

DR. MOOSNICK: The edema was minimal. The venous pressure was normal and after bed rest, the ankle edema disappeared completely.

DR. PEPPARD: After abdominal paracentesis, were there any special findings on palpation of the abdomen?

DR. MOOSNICK: The patient was rather obese and we were unable to make out any abdominal masses. Our clinical impression was cirrhosis of the liver and intra-abdominal malignancy, site of origin undetermined.

Autopsy Findings

DR. PAPERMASTER: Except for hypostatic pneumonia in both lungs, the anatomical findings of interest were limited to the abdomen. The liver weighed 3,150 grams, about twice normal weight. The external surface showed a portal cirrhosis and in addition, the liver was riddled with tumor nodules which varied in size up to about 20 cm. in diameter. The nodules were bright yellowish-green in color and had the characteristic appearance of a primary carcinoma of the liver. Only one small metastasis was found and that was in the subcutaneous tissue of the abdominal wall. We were unable to find the nodules on the peritoneum that the peritoneoscopist described. The cortices of the kidneys contained numerous small abscesses. The abdominal cavity contained about six liters of blood-tinged fluid.

DR. ANDRUS: The striking thing in this history is that here we have a chronic alcoholic who develops ascites and ankle edema with icterus. We were unable to explain the bloody abdominal fluid on the basis of uncomplicated portal cirrhosis. The microscopic sections of the liver revealed the characteristic changes of Laennec's cirrhosis. In addition there was a primary carcinoma of the liver of the hepatoma type. The tumor was extremely well differentiated and many of the

(Continued on Page 579)

HISTORY OF MEDICINE IN MINNESOTA

HISTORY OF THE MINNESOTA STATE MEDICAL SOCIETY

By ARTHUR S. HAMILTON, M.D.
Minneapolis, Minnesota

(Continued from June Issue.)

Twenty-third Annual Meeting

The twenty-third annual meeting of the Minnesota State Medical Society was held in Minneapolis June 17, 18, and 19, 1891. Dr. W. L. Beebe of St. Cloud, president, presiding. Several changes in the usual program for the work of the various sections were made and the usual roll call of members was omitted, a register book signed by members attending taking its place. For the first time since the Society was formed a member was expelled for advertising. A stenographer to report the discussions of the papers read was again to be hired and again a committee was appointed to revise the constitution. Twenty-five new members were admitted, bringing the number of active members to three hundred and eighty-four.

Doctor Beebe, in his inaugural address, did not, as was usual, review the advances in medicine during the past year but advised a more careful consideration and review of the papers to be presented. He also noted that medical colleges were now demanding more preparation on the part of students presented for admission and stressed the necessity of their action. With regard to the investigation of Professor Koch on tuberculosis he stated that although his claim of curing the disease with tuberculin has as yet not been established, his work had stimulated bacterial investigation to such an extent that no doubt many valuable results in the etiology and cure of infectious diseases were prone to follow.

The papers read at this meeting as a whole were of very high order. They were thoroughly discussed and in several instances the discussions were of great value. Most of the papers presented related to surgical aspects of diseased conditions except those of Doctor Spencer and Doctor Bean. The former discussed the clinical aspects of the newer findings of bacteriologists, a very logical discussion. The latter narrated his experiences with tuberculin. He said we are not justified in stating that Koch's treatment has been found inefficient both as a diagnostic and therapeutic means in tuberculous disease.

As a whole the papers read were much superior to those formerly presented and the discussions thorough and significant. Since surgery has advanced much more rapidly in the few previous years than medicine it is not surprising that medical aspects of disease were not much in evidence at this time.

Doctor Parks Ritchie of Saint Paul was elected president for the following year.

Twenty-fourth Annual Meeting

The twenty-fourth annual meeting of the Minnesota State Medical Society was held in Saint Paul, June 15, 16, and 17, 1892. The meeting was called to order by President Ritchie.

HISTORY OF MEDICINE IN MINNESOTA

At this meeting the Society was incorporated. It was found that the society had been incorporated in 1869 but that the articles were never filed so that only those five members who signed the articles in 1869 were members of the Society as then formed. This was remedied by the new articles of incorporation. The constitution of the Society was again revised and considerable discussion of proposed amendments took place. The new constitution was printed with the transactions.

A resolution was presented by Dr. William Davis of Saint Paul authorizing the employment of attorneys to examine the laws of this and other states for the prosecution and punishment of the crime of abortion in order to see whether our laws relating to this crime could not be improved. The reason for the presentation of this resolution was that a Saint Paul physician had been convicted of the crime of abortion, the verdict, in the opinion of many, not being sustained by sufficient evidence. In our state, there was a special rule of evidence for cases where abortion is charged which did not exist in most of the states, the ordinary rules of evidence there prevailing. (See History of Medicine in Ramsey County previously presented.) This resolution, after some debate, was carried and the president appointed a committee of attorneys to examine the laws.

Dr. A. W. Abbott of Minneapolis was unanimously elected president for the ensuing year and thirty-four new members were admitted.

The president's address was largely concerned with the recent advances and activities of the Board of Health and the State Board of Medical Examiners and the recent interest throughout the country in the prophylaxis of tuberculosis.

The papers read at the meeting showed that the authors had thoroughly studied the subjects they presented. Various surgical aspects of gynecologic and surgical conditions were presented as well as the medico-legal aspects of court procedures. The papers were thoroughly discussed and it is evident that the reporter of the meeting was able to adequately transcribe the thoughts of the speakers. There were no pathological presentations and the materia medica section consisted of but one brief presentation. In the Section on Diseases of Children for the first time no mention was made of diphtheria. Most of the papers were presented by faculty members of the University staff.

Twenty-fifth Annual Meeting

The twenty-fifth annual meeting of the Minnesota State Medical Society was held in Minneapolis on June 21, 22, 23, 1893. The meeting was called to order by the president, Dr. A. W. Abbott of Minneapolis.

There is no mention in the minutes concerning the resolution regarding the changing of the law relating to the crime of abortion presented by Dr. Davis and passed at the previous meeting. The legislature of this year, however, passed a new law deleting the article relating to a special rule of evidence in such cases, which was a logical and necessary step. It was again found necessary at this time to revise to some extent the constitution of the Society and a committee was appointed to eliminate some of the articles that conflicted with others. The dues, which previously had been two dollars annually, were raised to three dollars because of the additional expenses to the Society. Twenty-nine new members were admitted at this meeting.

The address of the president was short. He stated that the progress of medicine and the elimination of irregular practitioners did not lie so much in the laws reg-

ulating medicine as in the scientific attitude of the practitioner. Medicine had become a science and the practitioner must practice it as a science. Quackery would eliminate itself if all kept up to date in the rapid progress of the Science of Medicine.

The surgical papers at this meeting were largely concerned with appendicitis as at this time the diagnosis was made early in the disease and the surgeon no longer waited 'til an abscess developed before operating.

A long symposium on chronic Bright's disease was also presented, the subject being thoroughly covered.

Hysteria in the Section on Nervous Diseases was also discussed and several papers relating to it were presented.

Dr. J. H. Dunn presented a long paper thoroughly discussing stricture of the urethra. The paper was so complete that there was little to discuss. Among men who previously have not presented papers at the state meeting and who later became prominent practitioners in the state one may mention H. Longstreet Taylor, Arnold Schwyzer, and Charles L. Greene.

It would be impossible and unnecessary to review all the papers presented. Surgery was the predominating subject but more well thought-out medical subjects were presented than hitherto. Gynecology and medico-legal subjects were also presented. Dr. W. J. Mayo of Rochester was elected president for the ensuing year.

Twenty-sixth Annual Meeting

The twenty-sixth annual meeting of the Minnesota State Medical Society was held in Saint Paul, June 20, 21, and 22, 1894. The president, Dr. W. J. Mayo, opened the meeting. Only seventeen new members were admitted.

There was little business before the Society. Money was appropriated to print a registry of physicians in Minnesota by the Board of Medical Examiners and the Board of Health and a resolution was adopted to prepare or select a series of tracts on the control of tuberculosis for distribution among the people.

Dr. Mayo, in his presidential address, reviewed the relations of the profession to other professions in the state, as well as our relation to the law and the status of the profession to malpractice, the coroner's office, and the commitment of the insane. The subject of the prophylaxis of tuberculosis was also touched upon. He made it plain that the public was now being aroused to the necessity for public action in this regard.

Thirty papers were presented at this meeting and for the first time physicians from without the state were invited to make presentations. Dr. Karl von Ruck of Ashville, North Carolina, spoke on "The Therapeutic Uses of the Pneumatic Cabinet" and Dr. E. C. Dudley of Chicago spoke on "Myomectomy as a Substitute for Hysterectomy." Sixteen of the papers were upon non-surgical subjects, showing that medicine at this time was making advances though it had been eclipsed by surgery in the last few years. For the first time in the history of the Society, a paper on cesarean section was presented by Dr. J. H. Dunn, who also presented "Observations on Appendicitis with a Brief Review of Thirty-eight Consecutive Cases."

Dr. W. T. English presented a paper on "The Parasitic Origin of Cancer" coming to the conclusion that the question of the parasitic origin was still debatable.

Dr. Justus Ohage of Saint Paul was elected president for the year 1895.

HISTORY OF MEDICINE IN MINNESOTA

Twenty-seventh Annual Meeting

The twenty-seventh annual meeting of the Minnesota State Medical Society was held in Duluth, June 19, 20, and 21, 1895, Dr. Justus Ohage, president, in the chair.

The minutes of this meeting are more extensively recorded than any previous meeting but the business transactions were of little importance. The subject of the use of diphtheria antitoxin was discussed by Dr. A. E. Spalding of Luverne. He had used it in seven instances and stated that "these few cases are not sufficient proof as to the efficacy of the serum treatment. I cannot help but feel that in it we have reason to take courage in fighting one of the most fatal and treacherous diseases we are called upon to treat."

A considerable number of individual case reports were made at this meeting but there were but one or two interesting and thoughtful papers presented. A symposium on insanity and hospitals for insane patients was covered by several who presented papers. Dr. John T. Roger's paper "Ectopic Gestation with the Report of Sixteen Cases" and "The Modern Management of Simple Fractures" by Dr. J. H. Dunn were the best presented papers of the session.

On the last day of the meeting the members of the Society journeyed to West Superior where the Wisconsin State Medical Society was meeting.

Dr. Frank Allport of Minneapolis was elected president of the Society for the coming year and fifty-one new members were admitted.

Twenty-eighth Annual Meeting

The twenty-eighth annual meeting of the Minnesota State Medical Society was held in Minneapolis, June 17, 18, and 19, 1896. The president, Dr. Frank Allport of Minneapolis, opened the meeting. The minutes of the meeting are quite voluminous but there is little of interest as they deal largely with routine matters.

The committee appointed at the previous meeting to investigate the use of antitoxin in comparison with other treatments for diphtheria made an extensive report. The mortality rate of those treated with antitoxin out of 643 cases reported in Minnesota was 12.09 per cent; of those not treated with antitoxin the mortality was 16.17 per cent. This mortality rate of 12.09 per cent is much higher than it should have been but in reading further in the report we find that in practically all the cases so treated the antitoxin was used late in the disease and the amount varied from only 5 to 30 cubic centimeters. Apparently the profession had not as yet learned the proper use of the serum.

Dr. Allport's presidential address was a review and criticism of the law in Minnesota relating to the office of coroner. He believed that the medical profession should endeavor to have a law passed correcting the present ones.

Dr. C. G. Slagle of Minneapolis discussed the use of antitoxin in the treatment of diphtheria. This paper was largely made up of quotations from the symposium heard on the subject at the preceding meeting of the American Medical Association. Apparently but few of those present had used or had any clinical knowledge of antitoxin, as the discussion was brief.

Pierce Butler, then County Attorney of Ramsey County, addressed the Society on "The Medical Expert." This was the first time, according to available records, that anyone not a physician had been invited to participate in the program of the Society.

HISTORY OF MEDICINE IN MINNESOTA

The Section on Gynecology presented a symposium on pus in the pelvis by Dr. Courtney of Brainerd, Dr. A. J. Mayo of Rochester, Drs. Abbott and Dunsmore of Minneapolis, and Dr. McLaren of Saint Paul. The subject was thoroughly covered.

Forty papers were presented at this meeting. Three of these were by speakers from Chicago and St. Louis. We note particularly a thesis on "The Management of the Senile Heart" by Dr. George Head, a very scholarly presentation. Dr. A. A. Law presented a short paper on "The X-ray." These three papers were the first on these subjects presented to the Society. Doctor Law took the first medical x-ray shadowgraphs in the state.

Dr. W. D. Flinn of Redwood Falls was selected as president for the coming year over Dr. W. H. Magie of Duluth by a close vote.

Twenty-five new members joined the Society this year.

Twenty-ninth Annual Meeting

The twenty-ninth annual meeting of the Minnesota State Medical Society was held at Mankato June 16, 17, and 18, 1897. Dr. W. D. Flinn, president, presided at the meeting and Dr. John F. Fulton of Saint Paul was elected president for the ensuing year. The minutes of the meeting are more voluminous than any previous meeting but are of no particular interest to us at this time. This meeting was not as largely attended as the three previous meetings.

The president's address dealt largely with progress made in the medical field, reduced mortality in diphtheria due to the use of antitoxin and the nationwide progress in efforts to eliminate tuberculous infection. Thirty-three new members were admitted to the Society and twenty-five papers were presented. The discussion of these papers were adequate.

Dr. Thomas McDavitt of Saint Paul presented "A Résumé of the Medical Legislation of the Past Year." A brief statement of the laws relating to medicine in forty-five of the states is given and those who may be interested in the status of medical licensure in the various states at this time may read it.

Dr. A. A. Law of Minneapolis read a paper on the utility of the x-ray in surgery, illustrating it with many shadowgraphs of patients of his own and of patients referred to him for diagnosis. The paper was an elaborate one and must have been of great interest to the audience for up to this time, perhaps, Doctor Law was the only physician using the x-ray as a diagnostic procedure. The other papers presented were on the whole excellent but short and the discussion of them as a rule longer than the papers themselves. Apparently Mankato was not a favorable locality for holding a meeting of the Society.

(To be continued in the August issue.)

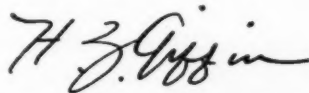
President's Letter

AN important conference was held in Cleveland on April 6, 1942. It was the first conference of its kind ever held in this country. Representatives of the American Medical Association and the American Pharmaceutical Association met to consider the relationship between medicine and pharmacy and to discuss the problems of each, and the principles of proper coöperation. Trends in pharmaceutical practice, the program of pharmaceutical education, and the relationship of both professions to the war and to civilian defense were the topics chiefly considered.

I believe we should all take cognizance of this movement to coördinate the activities of the two professions and in spite of the commercial appearance of the modern drug store, it should be clearly recognized that pharmacy is a profession with a code of ethics quite comparable to the code of ethics of medicine—in fact, that medicine and pharmacy are twin professions. Pharmaceutical education now has a cultural and scientific background. The pharmacist knows that education is a continuous process throughout life. He comes to realize that, as in medicine, service and the good of the patient are the primary considerations. Scientific advances vitally affect both professions. The physician cannot function without the pharmacist and the pharmacist cannot function without the physician. The two professions should coöperate as closely as possible. The physician should use the pharmacist as consultant and the pharmacist should utilize the physician as consultant. As far as possible, consultation should be on a personal basis in order to maintain mutual confidence and disseminate knowledge. In the modern type of drug store, drug clerks and salesmen should, above all others, be instructed to utilize the pharmacist as a consultant. It is estimated that two-thirds of the people rely on self-treatment. The layman frequently consults the druggist and pharmacist because of their accessibility. In this situation, the responsibility of the pharmacist is enormous, and in accepting this responsibility he should be well enough informed in the fundamental principles of therapeutics and public health to give suggestions and at the same time to know the proper limits of advice. With better coöperation in matters of public health the pharmacist can be a great help to physicians, to health departments, and to other agencies concerned in public welfare. I know that the physicians in this state are very much pleased with the activities of the State Pharmaceutical Association, especially, recently, with the way in which its members have assisted by means of window displays on nutrition, immunization and vaccination, cancer and tuberculosis. The pharmacist also becomes an important factor in the organization of civilian defense by reason of his knowledge, his contacts with the public, and his accessibility.

There is a constant pressure on the pharmacist who becomes proprietor to forget the ideals of pharmacy. The pharmacist works in an environment of commercialism and commercialization and must struggle to maintain his attitude as a professional man. It is absolutely necessary that physicians do all they can to counteract this influence and to assist the pharmacist in his efforts to keep pharmacy clean and progressive and on a professional basis.

I have suggested to the State Pharmaceutical Association at a recent meeting that a conference be arranged between representatives of the State Pharmaceutical Association and the State Medical Association, probably through the interprofessional relationship committee of each organization, in order that a set of principles and policies be outlined. The shortcomings of both the physician and the pharmacist, each in his relations with the other, can be considered and methods for their correction recommended. Movements for the promotion of public welfare can be sponsored and questions of medical and pharmaceutical education can be clarified. This should form a practical basis for active coöperation and mutual assistance.



President, Minnesota State Medical Association

EDITORIAL

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BUSINESS MANAGER
J. R. BRUCE

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PROCUREMENT AND ASSIGNMENT COMMITTEE

LONG before war was declared the medical
profession took stock of its man power and
compiled voluntarily a very complete file of its
membership and the qualifications of each mem-
ber. In the event of war the profession would be
ready with the essential information to facilitate
the transfer of a considerable portion of the pro-
fession from civilian practice into the armed
forces.

To avoid a repetition of experience in World
War I, when unregulated voluntary enlistment
resulted in some physicians essential in their civil-
ian practice entering the service and others who
should have volunteered failing to do so, the pro-

fession offered to manage the gigantic under-
taking and procure the required number of men
for the government. A national committee of
physicians labeled the Committee on Procure-
ment and Assignment was appointed to accom-
plish what the name signifies. State and county
sub-committees of members of the profession
were appointed with the idea that local members
were best able to choose who among the local
membership were non-essential in their civilian
practice and were, therefore, available for serv-
ice.

Because voluntary enlistment in the Medical
Corps was not keeping up with requirements,
medical enlistment boards were established
throughout the country similar to the one in the
Lowry Building in Saint Paul, with authority to
grant commissions as lieutenants and captains
without delay. Letters were sent out to those
certified by local Procurement and Assignment
Committees as available, asking them to volun-
teer. Results in Minnesota, and apparently very
generally throughout the country, according to
McNutt's speech before the House of Delegates
of the A.M.A., have been disappointing, and a
little veiled threat was made by the speaker that
drafting of physicians might be necessary.

The mechanism for procuring the requisite
number of medical personnel by means of Pro-
curement and Assignment Committees has so
far failed. The reason was somewhat clarified
by the lively discussion which occurred at the
meeting of the House of Delegates June 28, fol-
lowing an address by Major Wood in charge of
the medical enlistment board in Saint Paul.

The local Procurement and Assignment Com-
mittees have simply certified the members in
their local societies who are non-essential in civil-
ian practice. These constitute a major portion,
in some instances at least, of the local county so-
ciety membership. If all so certified volunteered
the whole purpose of the establishment of these
committees would be nullified. The decision as
to who should and who should not volunteer is
still left to the individual. The difficulty of the
individual in deciding the question, and not neces-
sarily lack of patriotism, accounts for much of
the lagging in enlistment.

It has been suggested that Procurement and Assignment Committees establish quotas for all the states and sub-divisions, and each local committee with a definite quota to fill select those who can best be spared and bring pressure on them to enlist. If this method does not bring results, and we know that in certain individual instances it will not, the local committees are the logical agencies to designate to Uncle Sam who should be drafted. The medical profession has never been found lacking in patriotism and it can be expected that with specific quotas as objectives the profession will respond in sufficient numbers.

THE MEULENGRACHT DIET FOR BLEEDING PEPTIC ULCER

IT has been generally accepted for some years that the medical and not surgical treatment is best for bleeding peptic ulcer. A patient suffering from loss of blood is not a favorable operative risk and frequently the operative treatment is met with technical difficulties. So-called medical treatment with blood transfusion when necessary has proven highly satisfactory.

Medical treatment has been directed toward not disturbing clotting of the bleeding vessel. One procedure has been no food or drink of any kind for twenty-four or forty-eight hours, supplying needed fluid parenterally. This was on the assumption or hope that an empty stomach is lacking in peristalsis (something which has never been proven) and is slow in gastric secretion, although not free of hydrochloric acid.

Sippy's recommendation was the administration of milk on the hour and large doses of alkalis on the half hour for the purpose of neutralizing the stomach acid and thus preventing the digestion of the clot of the ulcer.

Several years ago Meulengracht¹ reported successful treatment of hematemesis and melena with food. His observations that sometimes such patients stopped bleeding when given food and that often ambulatory patients recovered from melena without making such change in their diets led him to try frequent feedings of a variety of foods in these cases. The patients were urged to eat as much and as frequently as they desired even on the first day of their bleeding, not only

bland food such as pureed vegetables, white bread and butter, rice and tapioca puddings, but also of meat balls, broiled chops, fish balls, apple sauce and stewed apricots with some alkali, belladonna and iron interspersed. Emphasis was laid on food and more food and not so much on alkalis.

In 1939 Meulengracht² further reported on his success with his rather bold innovation. In a series of 491 cases of "profusely bleeding ulcers" there were ten deaths, a mortality of about 2 per cent. One of these ten died following perforation and four died before they had time to eat. The mortality was admittedly low.

When confronted with a patient suffering from a bleeding peptic ulcer and vomiting blood, one might be excused from ordering a full meal and urging the patient to eat. You can lead a horse to water but you can't make him drink, and we suspect eating a full meal would be and was a physical impossibility for some of his patients. Nor do we see any advantage gained by the immediate administration of such a diet.

Meulengracht has, however, shown that food at frequent intervals is successful in the treatment of bleeding ulcers. Undoubtedly another contribution he has made which is fully as important is the confirmation of the idea that a more liberal diet in the treatment of ulcers in general promotes more rapid recovery. The early reliance on large amounts of alkali and greatly restricted diets over long periods of time undoubtedly has resulted in prolonged convalescence.

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GOVERNMENT SAVINGS BONDS

FINANCING our war effort is one of the jobs which we have to handle on the home front. In addition to tax payments, this assignment calls for at least 10 per cent of all individual incomes to be invested in United States Savings Bonds.

Individual quotas can and must be met. Organizations and associations likewise are accepting their responsibility in the fiscal program. And the opportunity for sharing the load has been stepped up for all large investors whether they be individuals or groups.

The present limit of \$5,000 in individual hold-

ings of Series E Bonds purchased in any calendar year will continue. These are the "People's Bonds" which can be purchased only by individuals and may be registered in the names of one or two persons or in the name of one person with a second listed as beneficiary.

The Series E Bonds range in cost price from \$18.75 to \$750. At the end of ten years the smallest of this series pays back \$25 and the largest \$1,000. This is a return equivalent to an annual interest rate of 2.9 per cent. The Series F Bonds, like the Series E, are appreciation bonds. Unlike Series E, they may be bought by institutions and clubs. The smallest costs \$18.50 and pays back \$25 at the end of twelve years, the largest costs \$7,400 and pays \$10,000 at maturity, a return equal to a 2.53 annual interest rate. The Series G Bonds, unlike E and F, are current income bonds which are issued at par and draw interest of 2.5 per cent a year during their twelve-year maturity period.

The value in making a good investment of one's dollars would be reason enough to buy War Savings Bonds. But one can't forget the need for this money in our nation's fight for victory. Nor can one forget that putting money into bonds is one way in which each individual can help in the attack on inflation.

SPLINTING BEFORE TRANSPORTATION

EVERY city and township in the state that boasts an ambulance would do well to follow the example of Minneapolis by passing an ordinance requiring not only the carrying of arm and leg fracture splints, but also requiring that the driver or attendant of the ambulance know how to apply them.

The common sense of such an ordinance should be obvious to any layman but especially so to a physician. Careless handling of a broken extremity only adds to the seriousness of the injury. The acquiring of sufficient knowledge of how to apply a splint before transportation to a hospital is not difficult. The equipment of ambulances with splints is not an expensive proposition and would pay large dividends.

Dr. Roscoe C. Webb has been the chairman of the state committee on fractures for a number of years and it was through his efforts that the Min-

neapolis City Council finally passed the ordinance. The passage of similar ordinances in other localities will doubtless depend on the initiative of members of the medical profession in calling the matter to the attention of local authorities.

DILAUDID ADDICTION

OUR attention has been called to the fact that the Minnesota State Board of Medical Examiners has been forced to suspend or revoke the medical licenses of a half dozen physicians for addiction to dilaudid.

Dilaudid hydrochloride (dihydro-morphinone hydrochloride) is closely allied to morphine, both chemically and pharmacologically, having the same analgesic property and the same depressant action on the respiratory system. Its action on the intestine may be less marked than that of morphine. On the other hand the ratio between effective doses of morphine and dilaudid and toxic doses is about the same.

When dilaudid was first available to the profession, the impression was given that there need be little fear of its producing addiction. This is not true. In the experience of the Board of Medical Examiners addiction to dilaudid is even more difficult to overcome than addiction to morphine.

A word to the wise is sufficient.

HOSPITAL GROWTH TRIPLED OVER THIRTY-ONE YEAR AVERAGE

American hospitals grew three times as fast last year as during the previous thirty-one years, according to the twenty-first annual hospital survey of the Council on Medical Education and Hospitals of the American Medical Association.

For thirty-one years, the report says, the average net increase in hospital facilities was around 25,000 to 30,000 beds each year. The increase between the censuses of 1940 and 1941 was 98,136 beds, which is "astounding even for this unusual period."

This growth, the report continued, is equal to construction of one 269-bed hospital every day, Sundays and holidays included, for a year.

Total capacity of registered hospitals was 1,324,381 beds and 66,163 bassinets. There are 98,136 more beds and 4,224 more bassinets than a year ago; reports were received for 6,318 registered hospitals out of a total of 6,358.

Results of a survey in January of this year of blood and plasma banks in approved hospitals showed that 462 of 1,070 such hospitals either had one or the other of these facilities or were in the process of establishing them.

Two hundred and six hospitals maintain both blood and plasma banks, with seventeen others in the process of development. In addition, there are 171 hospitals operating plasma banks and thirty-three separate institutions with blood banks.—*Science News Letter*, April 25, 1942.

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

WARTIME MEETING AT ATLANTIC CITY

The war and its effect upon the practice of medicine occupied the time and attention of delegates to the American Medical Association to the virtual exclusion of all save routine business at the Atlantic City session.

Important conferences on medical insurance plans and on legal medicine provided opportunity for some discussion of vital social, economic and political problems but significant official action on such matters inevitably gave place on the floor of the House of Delegates to more pressing matters related to medical participation in the war.

Highlighted in the proceedings was the announcement by Paul V. McNutt, Director of Man Power, concerning the army's urgent need for physicians with the armed forces.

Medical Officers Needed

The original estimate of 25,000 needed by December 31 has been increased this year. Removal of this unprecedented number of men from civilian practice will entail new hardships for those who remain at home as well as for those who are forced to leave their practices to enter the service. Rigorous rationing of medical service to cover vital needs in industry and the health services, as well as in the civilian population, will undoubtedly be necessary and allocation of men from the Procurement and Assignment Service registry is expected to follow where it is necessary when military needs have been met.

Draft Threat

Minnesota's contribution of men to the Army, Navy and Marine Corps has been outstanding among the states but more are required and the clear implication of McNutt's address in Atlantic City was that exceptional methods will be used all over the country to induct younger physicians in-

to the service if voluntary applications fall short of the required number.

Those who wait for the draft or other compulsory methods may be commissioned in time but all authorities agree that they run the risk of indefinite delay after induction. Those who are classified in 1A, especially, face the possibility of being forced to give regular medical service as noncommissioned officers or privates. The Army is rolling up into a formidable impersonal machine in which there may be no consideration for the individual who has waited too long to apply for a commission.

The best advice obtainable is that all physicians who are 44 or under should be making plans now to enter the service. All will inevitably be in the fighting forces soon, according to official information on the subject, if the war effort continues on the present scale.

TWO-YEAR MEDICINE

The shortage of doctors for the military forces, obviously serious enough in itself, may have unforeseen repercussions.

There is a definite possibility that the government may undertake to establish its own schools of military medicine with courses limited to two years. The proposal was discussed in Congress recently by New York's Samuel Dickstein who, as sponsor in the House for the Army pay legislation, may be considered to have the ear of the War Department.

Congressman Dickstein proposed an abbreviated course with emphasis chiefly on military surgery, open to candidates with two years of pre-medical training, to be nominated, as candidates for West Point and Annapolis are now nominated by Congress. He envisioned nine of these schools, one for each corps area, which would turn out physicians rapidly and in large numbers. After the war is over, he proposed to use

these men for government services of all sorts including the Veterans' Administration, the United States Public Health Service and government health insurance services, if and when government health insurance becomes a fact.

Discrimination Charged

Justification for the bill would be the need for doctors in the Army which is not now being met by civilian physicians and also the social and racial discrimination which the Congressman charges against medical schools of the country. This discrimination has prevented hundreds of well-qualified students, in his opinion, from entering medicine.

The charge of discrimination made by Dickinson is obviously absurd; but the bill which he plans to sponsor should not be dismissed lightly by physicians and educators who have worked devotedly to bring standards of medicine to their present level in the United States.

Threat to Present Standards

Those who cherish our system of education and practice will undoubtedly do all in their power to see that urgent military needs are met among physicians who have qualified according to present high standards of training. Otherwise it is obvious that extraordinary methods will be taken and the presence of hundreds of half-trained men with commissions in the Army Medical Corps would virtually guarantee a new and regrettable era in post-war medicine in the United States.

A. M. A. CENSUS

Some interesting figures about the physicians of the United States have been secured as a result of the census taken by the American Medical Association's Committee on Medical preparedness.

These figures, some of them never available before, were reported by the committee in Atlantic City. About 158,000 out of the total 180,000 listed in the 1940 American Medical Directory, or approximately 86 per cent, filled out and returned the questionnaire. For the remaining 22,000 who failed to do so, incomplete schedules were filled out in the Bureau of Medical Economics or at the headquarters of state medical associations with all available information so that the punch

card file would contain at least a minimum of information about every physician in the United States.

It is obvious, of course, that deaths, changes of address and practice and new admissions make constant changes necessary and from the beginning of the census a routine has been established for making alterations as soon as information is received.

As a result of two years' effort, records and punch cards are now on file for more than 181,500 physicians in the United States and its outlying territories and possessions. Of this number some 176,000 are located in continental United States.

Specialists Outnumber General Practitioners

As of January 31, 1942, 85,964 of these were in general practice and 90,227 specialists (including those classified as fully qualified specialists devoting their full time to a specialty and physicians who devote only special attention or a part of their time to some special branch of medicine). The ratio of full-time specialists to special attention physicians is about 43 to 57.

The total number of physicians engaged in full-time appointments was found to be 7,216. Of these, 2,816 hold teaching appointments, 910 are engaged in full-time research work, 1,179 hold executive positions and 2,243 are engaged in full-time work in industry. Many of the latter are not actually caring for the sick or injured though they are contributing to the health of the industrial population.

In Government Service

The total numbers of physicians employed in some form of government service as of July, 1940, was 9,819, but this number is thought to have changed considerably in the last two years. In public health there were:—U. S. Public Health Service, 1,789; state health departments, 1,410; local health departments, 2,341; Veterans' Administration, 1,779; Indian Field Service, 910; other federal agencies, 2,293.

In hospital service there was a total of 16,457 physicians; in hospital administration, 3,089; as residents, assistant residents and fellows, 6,149, and as interns, 7,219.

Private Practice Leads

A total of about 142,700 physicians of all ages were classified as engaged in private practice. Among the total number in practice in the con-

continental United States, 164,488 were white male, 8,035 were white female, 3,362 were Negroes (both sexes) and 306 of other races.

In January, 1942, there were 42,721 physicians under 26 years of age in continental United States; 38,212 between 36 and 44 inclusive; 31,904 between 45 and 54 and 63,354 were 55 and older. There were 3,942 who were 80 or older, 255 who were 90 or over and exactly 6 who were 100 years or older.

Military Qualifications

Of the 112,800 physicians of military age, many, of course, cannot qualify for full military service and others cannot be spared since it is obvious that the 63,354 physicians who are 55 years of age and older cannot be expected to supply all of the medical services needed by the civilian and industrial population, even when reduced by the removal from the ordinary population of several million men in the armed forces.

Shortages

Among significant discoveries made on the basis of the census was the fact that the number of qualified physicians in certain specialties is so small that when military and civilian needs are considered there appears at once a serious problem in the equitable distribution of the available supply. Among these are neuro-surgery, plastic and maxillofacial surgery, orthopedic surgery, thoracic surgery, neurology, anesthesia, pathology, clinical pathology and bacteriology. There is likewise a serious problem, apparently, in the supply of qualified physicians for certain services in industry.

Used for Clearance

When the Procurement and Assignment Service was organized in October, 1941, the census material which had been arranged in listings was put to practical use in the clearance of physicians who had applied for commissions in the Medical Corps. The medical preparedness section of the Bureau of Medical Economics was designated as the Consultant Office of the Procurement and Assignment Service and, to date, 13,468 names have been cleared for commissions. Of these, 100 were Negro physicians and 1,753 were marked for assignment to the Air Corps.

Use of the census is being made now by several of the Medical Recruiting Boards set up recently to receive applications for commissions

in the Medical Corps and by state Procurement and Assignment Committees. It was also used to clear the names of 7,000 physicians in general practice and the specialties for the Selective Service System in connection with its program of rehabilitation.

MALPRACTICE AND DIAGNOSIS

From the address of Hubert Winston Smith, Associate in Medico-Legal Research, Harvard Law School and Harvard Medical School, on "Legal Responsibility for Negligent Diagnosis" delivered at the American Medical Association meeting at Atlantic City:

"It is my personal opinion that something like 70 per cent of all malpractice claims involve failure of the fact-finding function of the physician. Breach of the primary duty of investigation leads on to such secondary medical derelictions as improper treatment, injurious advice, failure to treat supervening complications, failure to give proper warning of special instructions to patients, nurse or interns, premature discharge of the patient, premature, delayed or unnecessary medical or surgical treatment and administration of contra-indicated anesthetics. . . .

"False Rumor"

"Recently, I noticed this statement in a medico-legal writing: 'Errors in diagnosis are errors in judgment and are not actionable, but errors of omission such as imperfect records, incorrect administration of treatment and so forth, are questionable and the final disposition of the case rests with the jury.'

"It would be a pity for this mistaken impression to gain credence and circulation among medical men. I shall try to clip the wings of such a false rumor before it flies too far. All negligence in medical practice can be analyzed functionally. We can truthfully say that such negligence always consists of a dereliction in discharge of the fact-finding function or of a dereliction in applying treatment. . . .

"Malpractice cases involving 'failure of the fact-finding function' have now come before appeal courts in England, the several dominions and all of the states in United States except Nevada and Delaware.

Should Take Inventory

"The practitioner should take an inventory of his own diagnostic qualifications in terms of the 'average level' or standard of medical practice in his own or similar localities. The following injunctions and suggestions may be worth noting:

1. Approach the identification of disease from the standpoint of differential diagnosis.
2. Offer a prayer when making a diagnosis but do not omit to take a history or to do a physical examination. Apply indicated procedures remembering that a trustworthy diagnosis should be established within a reasonable time.
3. Disclose the need for a consultant to the patient or the lack of proper instrumentalities. Association of a consultant is usually equivalent to reference when one doubts his own competency but need for special apparatus may call for prompt hospitalization.
4. Keep at least memorandum records.
5. If an independent technician is to be used constitute this person an employe of the patient by getting the latter's consent and by mentioning the fact that the fee is separate since the technician is not connected with the attending physician.
6. Pay just regard to the patients' own self-diagnosis, particularly diagnosis of pregnancy in a multiparous woman.
7. Confirm or refute diagnostic opinions of previous physicians but do not adopt them without independent examination.
8. Check x-ray films to see that they cover the area ordered photographed.
9. Do not destroy x-ray films or records; this creates an unfavorable impression in jury trials and may warrant an inference that the evidence was suppressed because favorable to the patient's contention.

"Remember that the duty of diagnosis is a continuing one calling for subsidiary surveillance throughout treatment and confirmation or discovery of complications. Reappraisal of the original diagnosis is called for when it is thrown in doubt by new facts reasonably discoverable in following the case.

"Remember, also, that even outstanding men may be derelict and jurors are not so tolerant of mistakes in diagnosis as of some other derelictions."

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

J. F. Du Bois, M.D., Secretary

Little Falls Quack Sentenced to 2½ Year Prison Term for Attempted Grand Larceny

Re: State of Minnesota vs. Stanley S. Piotrowski.

On June 18, 1942, Stanley S. Piotrowski, fifty-five years of age, 209 Third Street, Southwest, Little Falls, Minnesota, was sentenced by the Hon. Don M. Cameron, Judge of the District Court, to a term of up to two and one-half years at hard labor in the state prison at Stillwater. Piotrowski, who holds no license of any kind in Minnesota, nor elsewhere, had entered a plea of guilty to an information charging him with the crime of attempted grand larceny in the second degree. In sentencing the defendant, Judge Cameron referred to him as a "common impostor."

In a joint investigation made by County Attorney Austin L. Grimes of Morrison County, Sheriff Wm. J. Butcher of the same county and a representative of the Minnesota State Board of Medical Examiners, it was learned that the defendant had obtained various sums of money from a dozen families in Little Falls and nearby on his promise to cure a variety of ailments ranging from arthritis to cancer. The fees charged amounted to \$50 in some cases. For this the patient would receive some "medicine" prepared by Piotrowski under the name of the S. P. Glegonias Medicine Co. Piotrowski was arrested June 1, 1942, by Sheriff Butcher and upon being arraigned in Municipal Court before Judge Phil S. Randall, demanded a preliminary hearing which was set for June 18. Judge Randall fixed bail at \$2000.00 upon recommendation of County Attorney Grimes. The defendant was unable to raise the bail and he was ordered to jail. After two weeks in jail Piotrowski decided to plead guilty.

The investigation also disclosed that Piotrowski was arrested in Saginaw, Michigan, July 27, 1931, for vagrancy and received a 30-day sentence. On October 2, 1937, the defendant was sentenced to a six-month jail term at Stevens Point, Wisconsin, for practicing medicine without a license. The defendant stated he came to Little Falls in the fall of 1941 from Le Center, Minnesota, where he claimed he had worked on a farm. Piotrowski told the Court he had an eighth grade education and that his occupation was "farming."

The Minnesota State Board of Medical Examiners wishes to emphasize the splendid cooperation received from County Attorney Grimes and Sheriff Butcher in this case and others of a similar nature. This marks the third successive medical prosecution handled by them in the past two years in which cases all of the defendants were convicted and heavily fined or sent to prison.

TUBERCULOSIS IS AN OLD AND DANGEROUS ENEMY

It lies in wait particularly for the young adult, whose services today and after the war must be of supreme value to the nation. Tuberculosis always increases in wartime, and measures must be taken now if the increase that we may expect in the near future is to be stemmed. Existing tuberculosis services deal with those who have symptoms of disease, or who feel ill. A new advance is now needed. This means finding cases in which the disease has started, but not yet caused the patient to feel ill. Often nothing may be necessary other than careful watching; in some, short treatment is required, but in all cases there is better hope of eradicating the disease.—From *Bul. Nat'l Assn. Prev. Tuber.*, Eng., Jan. 11, 1942.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

Physicians Licensed May 8, 1942

By Examination

Anderson, John Theodore, U. of Minn., M.B. 1941, Minneapolis General Hospital, Minneapolis, Minn.
 Anderson, Martin Eli, Jr., P. & S., Columbia U., M.D. 1939, Mayo Clinic, Rochester, Minn.
 Anderson, Ralph Theodore, Temple U., M.D., 1940, Ancker Hospital, St. Paul, Minn.
 Atwater, John Spencer, Johns Hopkins, M.D. 1939, Mayo Clinic, Rochester, Minn.
 Baich, Velemir Michael, U. of Minn., M.B. 1941, Gillette Hospital, St. Paul, Minn.
 Benton, Deane Weigle, U. of Minn., M.B. 1942, 923 N. Broadway, New Ulm, Minn.
 Blumberg, Henry Bernard, Northwestern, M.B. 1941, 2064 Summit Ave., St. Paul, Minn.
 Cooper, Wilford Leroy, U. of Texas, M.D. 1939, Mayo Clinic, Rochester, Minn.
 Custer, Monford Daniel, Jr., Columbia U., M.D. 1940, Mayo Clinic, Rochester, Minn.
 Dochat, George Ronald, U. of Pa., M.D. 1938, Mayo Clinic, Rochester, Minn.
 Fischer, Albert, Baylor U., M.D. 1940, Mayo Clinic, Rochester, Minn.
 Foerster, James Motz, Washington U., M.D. 1940, Mayo Clinic, Rochester, Minn.
 Frisch, David Charles, U. of Minn., M.B. 1941, 241 Jackson St., Anoka, Minn.
 Glenn, Donald Lockhart, U. of Pa., M.D. 1939, Mayo Clinic, Rochester, Minn.
 Goss, Martha Danielson, Rush Med. Col., M.D. 1934, Glencoe, Minn.
 Harris, William Eugene, U. of Minn., M.B. 1941, Ancker Hospital, St. Paul, Minn.
 Hurly, John Thomas, U. of Minn., M.B. 1942, Glasgow, Mont.
 Irons, William Elmore, Med. Col. of Va., M.D. 1937, Mayo Clinic, Rochester, Minn.
 Jones, Edward Tracy, U. of Minn., M.B. 1941, Trinity Hospital, Minot, N. D.
 Kapsner, Alfred Theodore, U. of Minn., M.B. 1941, St. Joseph's Hospital, St. Paul, Minn.
 Keffer, William Hiliary, U. of Pa., M.D. 1940, Mayo Clinic, Rochester, Minn.
 Kraemer, George Nicholas, U. of Minn., M.B. 1941, Minneapolis General Hospital, Minneapolis, Minn.
 Kusz, Clarence Vincent, U. of Minn., M.B. 1941, 742 Hawthorne St., St. Paul, Minn.
 Lane, Robert E., Northwestern, M.B. 1941, 2284 Highland Parkway, St. Paul, Minn.
 Lewis, Floyd John, U. of Minn., M.B. 1941, University Hospital, Minneapolis, Minn.
 Lichtman, Aaron Lee, Cornell U., M.D. 1938, Mayo Clinic, Rochester, Minn.
 Luth, Duncan Voss, U. of Minn., M.B. 1941, St. Mary's Hosp., Duluth, Minn.

MacCarty, Collin Stewart, Johns Hopkins, M.D. 1940, Mayo Clinic, Rochester, Minn.
 McCannel, Malcolm Archibald, Temple U., M.D. 1941, Ancker Hospital, St. Paul, Minn.
 McIntosh, George Fredrick, Rush Med. Col., M.D. 1941, 443 Ashland Ave., St. Paul, Minn.
 McMillan, Robert Monroe, Johns Hopkins, M.D. 1938, Mayo Clinic, Rochester, Minn.
 Northrup, William Frederick, Jr., U. of Mich., M.D. 1938, Mayo Clinic, Rochester, Minn.
 Owens, Arthur Hazleton, Jr., Tulane U., M.D. 1939, Mayo Clinic, Rochester, Minn.
 Paulson, Gordon Stanley, U. of Minn., M.B. 1942, 321 Vernon Ave. E., Fergus Falls, Minn.
 Petrich, Thomas George, U. of Minn., M.B. 1941, Medical Centre, Jersey City, N. J.
 Popovich, Stephen John, U. of Cal., M.D. 1941, Mayo Clinic, Rochester, Minn.
 Rygh, Harold Norman, U. of Minn., M.B. 1938; M.D. 1939, 1906 1st Ave. S., Minneapolis, Minn.
 Schroeder, John Henry, Northwestern U., M.B. 1940, M.D. 1941, Minneapolis General Hospital, Minneapolis, Minn.
 Seery, Thomas Michael, U. of Minn., M.B. 1941, 611 E. 14th St., Minneapolis, Minn.
 Shands, Harley Cecil, Tulane U., M.D. 1939, Mayo Clinic, Rochester, Minn.
 Shullenberger, Cleo C., Indiana U., M.D. 1939, Mayo Clinic, Rochester, Minn.
 Sjoding, Jennings Donald Merrin, U. of Minn., M.B. 1941, Bethesda Hospital, St. Paul, Minn.
 Stiepan, Frederick Edward, U. of Minn., M.B. 1941, U. S. Marine Hospital, 4141 Clarendon Ave., Chicago, Ill.
 Strandell, Everett Leonard, U. of Minn., M.B. 1942, 611 Walsh St., Crookston, Minn.
 Strickler, Jacob Harold, U. of Minn., M.B. 1941, Minneapolis General Hospital, Minneapolis, Minn.
 Taylor, John Champneys, Yale U., M.D. 1940, Mayo Clinic, Rochester, Minn.
 Urban, Don A., Ohio State U., M.D. 1940, Mayo Clinic, Rochester, Minn.

By Reciprocity

Ballou, Charles, U. of Minn., M.B. 1939, M.D. 1940, 500 Lee St., Franklin, Va.
 Dickson, Franklin H., Jr., U. of Ill., M.D. 1941, Proctor, Minn.
 Johnson, James Robert, Harvard, M.D. 1939, Mayo Clinic, Rochester, Minn.

National Board Credentials

Backus, Reno Warburton, Rush Med. Col., M.D. 1926, Glen Lake Sanatorium, Oak Terrace, Minn.

INDUSTRIAL HEALTH

Edited by the Committee on Industrial Health and Occupational Diseases

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STALKING TUBERCULOSIS

The field of Industrial Medicine has in the last few years expanded rapidly. This expansion has been definitely exploited in the proceedings of the Fourth Annual Congress on Industrial Health, held in Chicago, January 12-13, 1942. This report comprises twenty-four separate papers dealing with subjects covering medical and surgical activities in industry, from "Traumatic Surgery" to the "Indiscriminate Administration of Vitamins to Workers in Industry."

There are many conditions and factors which constantly modify or influence Industrial Medicine. The Council on Industrial Health in 1940 stated that a properly administered health program should:

1. Prevent disease or injury in industry by the establishment of proper control over industrial environment;
2. Promote restoration to health and earning capacity as promptly as possible after industrial injury or disease;
3. Conserve the health of workmen through physical supervision and education."

"These are expressions concerning scopes and not of specific functions."

This program was constructed in peace times and primarily its object was to promote the physical welfare of every worker.

Now we are at war! Conditions have suddenly changed. Never before has the manpower of America been so carefully scrutinized. Never before have the local, state and national organizations interested in preventive medicine been more vigorous.

Mr. Paul V. McNutt, Federal Security Administrator, Washington, D. C., who addressed the House of Delegates at the American Medical Association, Atlantic City, June 8, 1942, stated, "We are now engaged in the total 'diagnosis' of America's manpower needs."

What are these needs? The answer is obvious—manifold! These needs must necessarily be considered in small groups or separately.

Among the many needs is the ever-present need of Tuberculosis case finding in all walks of life.

In a communication, dated June 20, 1942, from the Hennepin County Tuberculosis Association, I quote, "The most extensive Tuberculosis survey ever attempted is now being carried forward by the army and navy physicians who are x-raying for tuberculosis one-twenty-fifth of the entire population."

Tuberculosis must be kept out of the army and defense industries, not only in times of war, but also in times of peace. How can this be done? There is but one answer—universal registration by x-ray films.

The *Bulletin of the Hennepin County Medical Society*, February, 1942, carries a "Statement of Student Tuberculosis Survey," issued under the supervising committee of the Hennepin County Tuberculosis Association, which gives complete information regarding the study of tuberculosis among the 3,376 senior students to graduate in 1942. It is hoped parental consent will be unanimous and that every student will have the advantage of the portable x-ray unit with which the miniature film inspection of the chest is made.

The article entitled "Tuberculosis Case Finding in Defense Industries" is as follows:

A photofluorographic unit for tuberculosis case finding in war industries has been assigned to North Carolina. A second unit is now being prepared for service in New Jersey.

Requests for the use of these units should be made through the state division of industrial hygiene to the Division of Industrial Hygiene of the National Institute of Health, Bethesda, Md. A waiting list will be maintained at headquarters and requests filled in order of receipt, consideration being given to the impor-

INDUSTRIAL HEALTH

tance and location of the industry making the request.

Personnel accompanying each unit includes a medical officer trained in interpreting 35 mm. films, a medical technician and a clerk. A portable condenser discharge x-ray machine has been added to the equipment, thus making it possible to obtain 35 mm. films in the absence of 400 milliamperage x-ray equipment. The U. S. Public Health Service will maintain the equipment and furnish x-ray films and developing supplies, repairs and replacements.

At the end of each survey of a particular industrial plant, a statistical and narrative report on the extent and result of the survey will be sent to the state health officer and plant medical director, after clearing the Division of Industrial Hygiene, National Institute of Health, and the States' Relations Division, U. S. Public Health Service. The films will be retained as permanent records in the Office of Tuberculosis Control of the Public Health Service. (Jour. A.M.A., June 13, 1942, page 568.)

In Rochester, New York, various authorities cooperating have set up a health project for the trainees attending vocational classes for war industries conducted by the Rochester Board of Health.

Full details of this interesting activity are incorporated in the paper entitled "Medical Aspects of Vocational and Industrial Training" by Dr. W. A. Sawyer (Fourth Annual Congress of Industrial Health). He states, "Following the medical examination, a preliminary rating is made in accordance with the following standards:

- I. In good physical condition—fit for any job.
- II. Having minor physical defects—fit for most jobs.
- III. Having major physical defects or conditions needing correction.
- IV. Having a disqualifying defect or physical condition which would be hazardous to the man or make it impossible for him to succeed at the job."

"Nine hundred and twenty-eight (33 per cent) were found to have positive tuberculin skin tests and were referred for chest x-ray examinations. Seventeen cases of tuberculosis were discovered, six of which were active."

From the above references and the wide sphere in which search for tuberculosis is being made, and the methods used, particularly the miniature x-ray film in civil, educational, army and navy activities, it would appear that the use of this type of apparatus under proper supervision would be the ideal method of examining industrial workers. It should be a part of the pre-employment examination as well as the periodic examination. It would appear also that under proper supervision that small industries could receive the benefit of such examination of their employees without great expense as well as larger industries.

It will be interesting to watch the result of the work being done in North Carolina and New Jersey which was quoted above.

Locally, should it be available, it would seem worth while to consider appropriating the idle x-ray unit of the Hennepin County Tuberculosis Association during the summer months for industrial tuberculosis survey.

ARCHA E. WILCOX, M.D.

CLINICAL-PATHOLOGICAL CONFERENCE

(Continued from Page 563)

nodules almost resembled the simple adenomas commonly found in portal cirrhosis. The tumor cells function, i.e., they produce bile. This is why the tumor tissue is greenish-yellow in color. Apparently the tumor arises in many places in the liver substance almost simultaneously.

There is still considerable controversy regarding the relation between chronic alcoholism and portal cirrhosis. The most common hepatic change in chronic alcoholics is a fatty liver. Most clinicians insist that most individuals who develop portal cirrhosis give a history of alcoholism but many pathologists take the opposite view. There is now some experimental evidence to indicate that there may be a relationship, for when depancreatized dogs are maintained with insulin they develop a fatty liver which may be depleted of its fat by the administration of lipocaine. If this experiment is done repeatedly, the dog also develops portal cirrhosis. It is, of course, well known that portal cirrhosis is common in some parts of the world where alcoholic beverages are unknown. Almost invariably the liver, which develops a primary carcinoma, is a cirrhotic liver. The blood in the abdominal fluid probably came from necrotic tumor nodules which hemorrhaged.

Anatomical Diagnosis: (1) Portal cirrhosis; (2) primary carcinoma of the liver; (3) ascites; (4) bronchopneumonia.

PROCEEDINGS of the MINNESOTA ACADEMY OF MEDICINE

Meeting of May 13, 1942

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town & Country Club on Wednesday evening, May 13, 1942. Dinner was served at 7 o'clock and the meeting was called to order at 8 o'clock by the President, Dr. Martin Nordland.

There were 46 members and 1 guest present.

Minutes of the April meeting were read and approved.

There was no business, either new or old, to come before the Academy, so the scientific program followed immediately.

Dr. Erling W. Hansen, of Minneapolis, read his Inaugural thesis on the above subject. Lantern slides were shown.

EYE LESIONS IN LEUKEMIA

ERLING W. HANSEN, M.D.

Minneapolis

The first description of eye lesions in the leukemias was made eighty years ago. Since that time a number of papers have been written, mostly describing the fundus lesions found in isolated cases or in several cases. Most of the others deal with chloroma, an interesting though usually rapidly fatal form of myelogenous leukemia, characterized by greenish colored myeloblastic tumors having a special predilection for periosteum and bone, particularly the skull.

We have reviewed the eye findings recorded in 100 cases of leukemia seen at the University Hospital in the past five years. Our findings are only those recorded in the general examination of the patient, or in consultation reports of special examinations. On more than half of the 100 cases there were eye changes noted though no special study had been made of the patients for the express purpose of recording all eye changes. Some of the patients, especially the small children with acute leukemias, have no recorded eye examinations, probably because they were very acutely ill on admission and lived only a short time.

For this reason, no attempt has been made to give percentages of various lesions found. Borgeson and Wagener³ in 1929 reported the changes found in 138 cases at the Mayo Clinic, finding retinal changes in 70 per cent of the acute and 63 per cent of the chronic cases. They were present in 87 per cent of the myelogenous group and 34 per cent of the lymphogenous. They quote the statement by Foster Moore¹⁰ that few if any patients died of leukemia, lymphogenic or myelogenic, acute or chronic, without at some time showing ocular manifestations. The studies of Gibson⁶ would seem distinctly to indicate that the amount of retinal hemorrhage is dependent on the severity of the anemia

and not on the number of cells shown in the white count.

In this series there were twenty-nine cases of acute lymphogenous leukemias, six classed as subacute lymphogenous, and twenty-four chronic; seven acute myelogenous, two subacute and thirty chronic myelogenous. Two were classed as aleukemic lymphogenous leukemia. Of the acute lymphogenous, twenty-six were under fifteen years of age, the other three being nineteen, fifty-one, and fifty-nine. Of the subacute and chronic lymphogenous only three were under fifteen and eight under fifty years of age; leaving twenty-two cases over fifty. In the seven cases of the acute myelogenous group, the ages varied widely from three to sixty. In the subacute and chronic, four were under fifteen, the youngest four; three between twenty and thirty; four were thirty to forty; seven were forty to fifty; nine were fifty to sixty; five were sixty to seventy. An analysis of the pathology presented does not indicate there is any material difference in the findings from an age standpoint.

The pathology found in various parts of the eye and adnexa:

Lids.—Ptosis of one upper lid was seen in one chronic lymphogenous, one acute myelogenous; ptosis of both upper lids in one of the cases of aleukemic lymphogenous leukemia. Horner's syndrome was present in one case of acute myelogenous leukemia and in the aforementioned case of aleukemic lymphogenous leukemia. Edema or generalized infiltration of the eyelids was seen more often in acute lymphogenous leukemia, five cases, although it was also present in both acute and chronic myelogenous leukemia. One of the acute lymphogenous leukemias showed also a hematoma in one lid, and another purpuric spots. Distinct nodules were present in two cases of acute lymphogenous leukemia, one of acute myelogenous and one of chronic myelogenous. These nodules are more often found in lymphogenous leukemias, being classed as lymphomata such as occur in the skin. Mickulicz disease was the original diagnosis of one boy of four who had involvement of the lachrymal and parotid glands and testicles. This was proven to be acute lymphogenous leukemia.

Globe.—The conjunctiva was described as yellow or icteric in cases in each group. Subconjunctival hemorrhages were present in a small number in each of the acute and chronic lymphogenous and the acute myelogenous. Some degree of proptosis was present in two cases of acute myelogenous and one of chronic myelogenous leukemia.

Leukemic growths are a not uncommon cause of proptosis, occurring unilaterally or bilaterally. O'Brien and Leinfelder¹¹ at Iowa City studied eighty-two con-

secutive cases of unilateral exophthalmus, thirty-one inflammatory and fifty-one noninflammatory. Of the latter, seven were due to leukemic tumors. Many of the tumors originate in the region of the lacrimal gland, and may therefore be confused with lacrimal tumors, though they are more often more or less fixed to the periosteum of the orbit. The most typical of these tumors is chloroma, occurring most frequently in children, especially males. As mentioned before, there seems to be a special predilection for the skull, though invading also frequently the sternum, ribs and pelvic bones.

Allison¹ in 1924 reported a case of a three-year-old with nodular growths from the outer canthus of both eyes temporally, with rounded areas over the entire cranium. Incidentally, the early symptoms in this case were painful swelling of the ankles, knees, wrists, which is often a prominent symptom of leukemia in children. Gump, Hester and Lohr² in 1936 reported a case of a man of fifty-five with progressive exophthalmus in both eyes, and a palpable tumor in the orbit below and temporal to the globe, on whom a diagnosis of monocytic chloroma was made. Here, on autopsy, a large tumor was found attached to each globe on the posterior wall, the optic nerve bisecting the tissue. Frost³ in 1937 reported a case of a four-year-old boy with a tumor attached to the roof of the left orbit, with a small one in the same position in the right orbit. The tumor from the left eye was removed and showed a dirty green color. Frozen sections helped to establish the diagnosis of chloroma. Blood studies then showed the presence of myelogenous leukemia. Together these papers give a very complete review of the subject of chloroma, with references. A very complete earlier bibliography is given by Bedell⁴ in reporting four cases. I quote from Ernestine Kandel⁵ in regard to the association of myelogenous leukemia and chloroma "With recent improvements in staining technique and better differentiation of the acute lymphoid myeloid leukemias, almost all the recent cases of chloroma have been reported as cases of myeloid leukemia, several standard texts to the contrary.

"The inevitable association of chloroma with myeloid leukemia should make it obvious that chloroma is simply a variant of myeloid leukemia with the multipotential myeloblast assuming the distinctive role as type cell of an invasive neoplasm."

It was one of these cases coming to the University Hospital that prompted this study.

The case mentioned above was a boy of three, a patient of Dr. Carl Larson first seen at the University Hospital on May 18, 1939. He had been seen by Dr. Frank Burch in consultation. Dr. Burch has told me that chloroma was suspected. The presenting complaint was protrusion of the left eye. One month before admission the parents had noted a "squint" in the left eye. Two weeks later the left eye began to swell and appear more prominent. There were no other complaints.

Examination showed exophthalmus of the left eye, which was displaced downward and slightly inward, with marked limitation of movement laterally and

downward, and no upward rotation. The skin of the upper lid was thickened and red with prominently dilated veins. A firm nodular mass was palpable below the upper orbital rim.

Fundus examination of this eye showed congestion and tortuosity of veins, an elevation of the optic disc of 2 to 4 diopters, and a detachment of the upper portion of the retina extending down to the optic disc. The right eye was normal except for almost complete absence of pupillary reflex to light.

General examination was negative except for findings of palpable liver and spleen, both about two fingers below the costal margin in the corresponding midclavicular line.

The blood picture showed hgb. 54 per cent, erythrocytes 3,200,000; leukocytes 16,400; neutrophils 53 per cent, lymphocytes 42 per cent, monocytes 3 per cent, eosinophiles 1 per cent, basophiles 1 per cent. Subsequent smears showed increasing numbers of myeloblasts and leukoblasts, promyelocytes and basket cells. Two punctures of sternal bone marrow showed acute or subacute myelogenous leukemic changes.

X-rays of the skull revealed no bone destruction around the orbits. Sutures appeared to be slightly separated and convolutional markings increased, suggesting there might be some increased intracranial pressure. There was evidence of a soft tissue mass filling the left orbit. From May 23 through 31, deep x-ray therapy was used on the left orbit with regression of the tumor mass. On May 29 a firm, somewhat tender swelling appeared over the right mandible which increased rather rapidly in size and was also treated by deep x-ray. Roentgenograms showed a considerable destructive process, through the mandible on both sides with large cystic areas of rarefaction, probably due to leukemic infiltration.

Blood transfusions of 200, 250 and 200 c.c. of citrated blood were given on May 25 and 26 and on June 4. This raised the hemoglobin but the blood picture remained much the same.

The patient was discharged to the parents June 9 and died on June 10. No autopsy was done.

This is clinically a case of chloroma, although technically that diagnosis cannot be made unless the typical greenish color of the tumor masses is actually seen. The other findings permit our calling it by that name, the significant findings being the orbital tumor causing proptosis of the globe, myelogenous leukemia shown in the blood and bone marrow smears, the invasion of bone, seen in the mandibles, the response to x-ray therapy and the rapidly fatal termination, about seven weeks from the first symptom of squint noted by the parents.

Iris and pupils.—Only two cases, a woman of sixty-six with chronic myelogenous leukemia and a boy of three with acute myelogenous leukemia showed absence of pupillary reaction to light. None had iritis or noticeable infiltration of the iris tissue. Goldbach⁶ analyzed 239 case histories of leukemia at Johns Hopkins Hospital and found pupillary changes in four each of acute and chronic lymphogenous leukemia, three in acute myelogenous leukemia and nine in chronic myelogenous leu-

kemia. There was iritis in three of the chronic lymphogenous cases in his series.

Retinal Vessels.—The most marked and constant finding in the vessels is engorgement of the veins with or without tortuosity. In this series this was slightly more marked in the chronic lymphogenous group than in the others. In two of the acute lymphogenous cases there was a noticeably lighter color to the blood. This, in some cases with high cell counts, is rather a striking feature. In some cases, mostly chronic myelogenous, white lines outline the distended veins, perivascular cellular infiltration. In one case of chronic lymphogenous leukemia there was thrombosis of the central vein.

Retinal Hemorrhages and Exudates.—Hemorrhages in the retina, of various size and shape, linear, flame shaped, small or large round hemorrhagic areas are common. It is not strange that retinal hemorrhages are common. Bleeding from the nose, uterus, bowel and kidney and under the skin are prominent early features of leukemia. Characteristic of some of the leukemic retinal hemorrhages are the white centers composed of accumulations of cells surrounded by the red ring of hemorrhage. Borgeson and Wagener felt that in lymphogenous leukemias, the occurrence of retinal hemorrhage may be taken as an indication of a tendency to occurrence of hemorrhages in other tissues. In myelogenous leukemia, retinal hemorrhages do not seem to have the same significance with regard to hemorrhages elsewhere. One of the striking fundus pictures seen in leukemias is that of large preretinal or subhyaloid hemorrhage, seen most often in the macular region. Numerous observers have included preretinal hemorrhage in their findings. In the present series this occurred in five cases, one acute lymphogenous leukemia, one chronic lymphogenous leukemia, two acute myelogenous leukemias and one chronic lymphogenous leukemia. In the acute lymphogenous case, a girl of eight, the eye grounds were watched from February 8 to the time of death on April 29. Original examination showed the veins markedly engorged and tortuous, many small flame-shaped hemorrhages over both fundi, with some more deeply placed round hemorrhages. There was a large preretinal hemorrhage, temporally, in the right eye and in the left eye one nasal and one temporal to the disc. A week later there had been marked absorption of blood, four small hemorrhages appearing on the disc. During the time of observation the hemorrhages could be seen to disappear without leaving a trace, while new ones appeared constantly. We have seen one case of chronic lymphogenous leukemia in which the original symptom bringing the patient for medical attention was loss of central vision due to preretinal hemorrhage.

Exudates seen were not peculiar to leukemia, some being so-called cotton wool patches and others more waxy in appearance, similar to those seen in diabetic patients. There was no preponderance in any one type of case, occurring in one patient of seventeen years, with subacute lymphogenous leukemia, two aged twenty-five and sixty-seven with chronic myelogenous leukemia, one

chronic lymphogenous leukemia, aged fifty-seven, and one acute lymphogenous leukemia, aged fifty-one.

Retinal Changes.—Pallor of the retina was noted in five cases—three of which were in children with acute lymphogenous leukemia, ages two, two and eleven. Moore has reserved the term leukemic retinitis for those cases with a pale or greenish reflex due to leukemic infiltration. Detachment of the retina was seen in one case of chronic lymphogenous leukemia, aged fifty-nine, and in the previously mentioned boy with acute myelogenous leukemia.

Optic Nerve.—While there were several cases recorded as having blurred disc margins, in only one case was there enough elevation to designate it as papilledema. One man of seventy-six with chronic lymphogenous leukemia showed marked pallor of the disc and one woman of 50 with chronic myelogenous leukemia was diagnosed as having optic atrophy. Several of the cases showed some paleness of the disc with other findings such as hemorrhages, without any infiltration of the retina, such a picture as one might see in severe anemias.

Summarizing, the eye lesions encountered in 100 cases of leukemia of all types showed little that would help to differentiate one type from another. Enumerating the lesions in the lids, we find hemorrhages, localized accumulations of leukemic cells both in the lid structure and the lacrimal glands. There may be edema of the lids causing a pseudo-ptosis or true ptosis, or narrowing of lid slits with other manifestations of Horner's syndrome. The globe may be proptosed by tumor formations in the orbit such as lymphomata and chloromata. The conjunctiva may show hemorrhage, an icteric tinge, with or without infiltration of cells. The pupils may show absence of reaction. Fundus examination may reveal a pale or yellowish green background, due to infiltration of the retina with leukemic cells. Detachment of the retina may occur. The veins are often engorged and tortuous, and in some instances the vessels may show white streaks sheathing them. There may be thrombosis of the central vein. One of the most constant findings is hemorrhage in the retina which may take place at various depths or may be massive into the subhyaloid space or actually into the vitreous. Retinal hemorrhages are sometimes characterized by white or yellow centers with red borders. The optic disc may show pallor of anemia, papilledema or atrophy.

Conclusion.—While leukemia is invariably a fatal disease, early recognition may be the means of prolonging life by such treatment as has shown some effect on the course of the disease. The first signs may be related to the eyes so we should be on the alert to recognize lesions which might lead to diagnosis and prognosis in the case of these unfortunate patients.

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Discussion

Dr. R. G. ALLISON, Minneapolis: Dr. Hansen was good enough to mention the case of chloroma which I reported some twenty years ago. This was a little girl whom the late Dr. Wm. Murray was called to see on the North Shore on a fishing trip. He recognized the case of clinical chloroma and brought the child into the University hospital for teaching purposes.

We x-rayed the skull and the long bones of the skeleton. The findings in the long bones were those of a proliferative periosteitis, the new bone being laid down at right angles to the shaft. In fact, any of the bones seen singly would be characteristic of a primary periosteal sarcoma.

I reviewed the literature at that time and found there were no bone findings in chloroma. Since that time, Leeward of St. Luke's Hospital in New York has reported two cases and Sherwood Moore of St. Louis has reported two additional cases. All of these cases, however, showed different bone findings; so, while bone findings do occur in chloroma, they are certainly not characteristic of the disease.

Dr. Hansen spoke of some of these cases showing widening of the suture lines and lack of closure of the fontanel. I think, as we x-ray more normal skulls, we realize that there is a great variation among the normal cases and consequently it is rather difficult to draw any conclusions from these findings.

I have had two very interesting cases where the eye condition was incidental to the general condition which was recognized beforehand.

Several years ago we had a young boy sent in to us for a chest x-ray. We found a large mediastinal mass which we thought represented Hodgkin's disease or lymphosarcoma. Biopsy of the cervical gland showed typical Hodgkin's disease. The mass was extremely sensitive to radiation and rapidly disappeared. Several days later the boy began to develop localized masses under his scalp. These were about the size of a large lima bean. They were extremely sensitive to radiation and disappeared within twenty-four hours under very slight dosage. Daily blood counts were done on this boy and the blood showed an essentially normal picture. About three weeks later he developed a mass in the conjunctiva which looked like a metastatic tumor. I called Dr. Frank Burch and asked him if Hodgkin's disease ever metastasized to the eye. He answered "No, but lymphatic leukemia does." Within a few days the blood showed the typical picture of an acute lymphatic leukemia.

Several years later, a surgeon referred me an elderly man who had had a biopsy of the cervical gland done at the Mayo Clinic and a diagnosis was made of Hodgkin's disease. He also had mediastinal involvement. We treated both the cervical area and the mediastinum, and the involvement disappeared.

Several years later the man came in to see me with a lesion in his conjunctiva. I sent him back to his referring surgeon for a blood count and he reported to me that the man's blood showed a typical picture of lymphatic leukemia.

I think Dr. Hansen is right about small doses of radiation handling these cases extremely well. We have certainly not found it necessary to employ large doses. Almost invariably they die later of Hodgkin's disease or lymphatic leukemia.

Dr. H. Z. GIFFIN, Rochester: Dr. Benedict expected to be here tonight to hear Dr. Hansen's paper and to discuss it. At the last minute it was found that he could not come.

I am interested in comparing Dr. Hansen's conclusions with those published by Borgeson and Wagener in 1929. At that time it was concluded that retinal lesions were more common in the acute cases than in the chronic cases, and much more common in the myelogenous type of leukemia than in the lymphocytic type. Dr. Hansen agrees that retinal lesions are much more common in the acute cases. However, he finds that lesions are more common in the lymphocytic type than did Borgeson and Wagener. The lesions described are similar in both reports, and all agree that in acute leukemia the retinal lesions are due mainly to anemia. Dr. Hansen finds visual disturbances more frequently than was thought to be the case at the time of the report of Borgeson and Wagener.

I should like to ask Dr. Hansen what percentage of cases in which he suspects leukemia from examination of the eyes prove to be leukemia, and I should like to have him say something more about other conditions in which ocular changes similar to those in leukemia occur.

Dr. W. E. CAMP, Minneapolis: I think Dr. Hansen has covered this subject so well there really is little to be said except to emphasize some of the things he has already mentioned. From the clinical standpoint, the infiltration of the conjunctiva extending up to the limbus and the infiltration of the orbital periosteum are the most important external phase of the disease. It is difficult to explain the sympathetic paralysis unless one figures that the cervical glands are involved by the leukemia, and give pressure on the sympathetic. Dr. Hansen has emphasized the hemorrhages and they are in direct proportion to the anemia and do not depend so much on leukocytosis. The choroid probably shows more infiltration than any of the other eye structures.

Dr. ALFRED HOFF, Saint Paul: Dr. Hansen has called attention to the value of fundus examination in general medical practice, especially in leukemia.

Regarding other diseases presenting changes in the ocular fundi, as discussed by Dr. Giffin, the following is worthy of comment.

A few years ago a man was admitted to the Ancker Hospital with a severe anemia, a high basal metabolic rate, a palpable liver and spleen, and a soft diastolic murmur. A thyroidectomy had been performed elsewhere about six months previously without relief. He had no temperature except on the first day of his admission. His blood picture was not significant. The question arose as to whether or not this man had a subleukemic condition.

The ocular fundi disclosed numerous small hemorrhages throughout. In the left, there was a large hemorrhage superior and nasal to the disc. The oculist stated that these hemorrhages could be of leukemic origin.

A surprise finding of a subacute bacterial endocarditis was present at autopsy.

How much diagnostic value are we going to obtain from fundi examination in aleukemia and in such allied conditions as lymphosarcoma, especially of the bowels which may terminate in leukemic organ and lymph node infiltration without evidence in the peripheral blood of a leukemic state.

If eye ground changes occur sufficiently early or at all—such examinations might be extremely helpful espe-

cially in a large city hospital where the material is available.

I would like to have Dr. Hansen comment on this phase of the problem.

DR. HANSEN, in closing: The point Dr. Allison makes about the similarity of chloroma and Hodgkin's disease is well taken. I think that was a point which, as I went over this study, became more and more apparent—some of these cases came in as Hodgkin's disease or Mikulicz disease. Clinically they do more or less merge into each other and a fairly large percentage of cases actually do come into the leukemia group. Dr. Allison confirms the fact that the x-ray changes in the skull are pretty well recognized as not of pathognomonic significance in the leukemias.

Dr. Allison also spoke of lymphomas which develop on the conjunctiva—not an uncommon thing; yet in this series of over 100 cases there was not a single case of this type. They sometimes form a fairly large red, soft, fairly acute looking mass which gives on pressure. In some of the others, as we see in the lids and in the skin generally, nodules are quite firm even on the conjunctiva. This difference in consistency depends on the relative amount of fibrous tissue and cellular content. These are especially found in lymphogenous leukemia.

Answering Dr. Giffin's question in regard to percentages of cases suspected from the eye examinations, I don't believe we usually see them first although I mentioned one case with subhyeloid hemorrhages with several smaller hemorrhages, none of which was typical of leukemia, and which on examination proved to be lymphogenous leukemia. The boy I reported—I did not know Dr. Burch had seen him—was suspected of being a case of chloroma in the myelogenous group, though at first we had no such blood picture. That perhaps is one thing I did not stress enough, that we do have difficulties, in early diagnosis especially. We may have a picture of just an increased leukocyte count; there may be immature myelocytes; we may also have an aleukemic leukemia that complicates the picture a good deal. When it comes to actual percentages of diagnoses made from eye findings, I think they would be relatively small.

In the differential diagnosis we have, of course, similar hemorrhages in our vascular-renal disease, in hypertension, in diabetes or hemorrhages that occur in the severe anemias. We have similar hemorrhages occurring in all, depending on the depth in the retina, in which the hemorrhage occurs, linear or flame-shaped in the fiber layers, more round and variable in size in the deeper layers.

As far as exudates are concerned, there is nothing characteristic that we do not have in other diseases, so-called cotton wool and the harder ones such as are seen in diabetes. The only distinguishing characteristics in the fundus are the cellular infiltrations in the retina and in the choroid which give the peculiar greenish sheen to the backgrounds, and the hemorrhages with the white centers which you saw on the screen. In general, examinations of the eye grounds in these cases, or in any case, by the ophthalmologists can be of help in differentiating certain of these lesions, but not much more in the leukemias than those I have spoken of.

The meeting adjourned.

E. V. KENEFICK, M.D., *Secretary*

During the first two years of the war (England) deaths from tuberculosis increased in Glasgow about 41 per cent. The 1941 record shows no improvement. Overwork, strain, ill-spent leisure are thought to be responsible for the rise.—S. LAIDLAW, M.D., and D. MACFARLANE, M.D., *British Med. Jour.*, Sept., 1941.

FEDERAL ASSISTANCE IN CURBING PROSTITUTION

Federal action to help state authorities stamp out prostitution and its gangsters is meeting with general approval in the 27 counties of Tennessee where the May Act was invoked for the first time on May 21. Dr. Ray Lyman Wilbur, president of the American Social Hygiene Association, reported recently at a meeting of the Association's executive committee.

"The American Social Hygiene Association is studying the effects of and public reaction to the application of this new federal law," Dr. Wilbur said.

"Secretary of War Stimson decided to put the Act into effect in cooperation with state and local officials who had been unable to cope effectively with commercialized prostitution under war conditions and with limited laws.

"This Act now puts the challenge clearly before the people of the nation, as well as their federal and state governments, to make use of its authority in addition to already existing social, health and legal activities against prostitution and the venereal diseases. These evils are not problems for solution tomorrow. They must be dealt with today. Military discipline and moral discipline are both essential if we are to have a strong army. They must be maintained."

Newspapers in Nashville and Chattanooga have reported the favorable public sentiment concerning federal participation in curbing organized vice in the Camp Forrest area. The officials of some counties not included in the area are quoted as hoping that the Act will be extended to their counties.

The Nashville *Banner*, in an editorial, says: "The law abiding citizens of middle Tennessee welcome federal action to strengthen enforcement of vice laws. The area has been no exception to that general impact of degrading and demoralizing elements against which the May Anti-Prostitution Act is aimed. To meet such a condition as this requires just such concerted and determined action as now is promised. That action will have the backing of law abiding citizens everywhere."

The May Act, signed by the President, July 11, 1941, provides that it shall be unlawful to engage in prostitution or to aid or abet prostitution within such reasonable distance of any military or naval camp or station as the Secretaries of War or Navy shall determine to be needful to the efficiency, health, and welfare of the Army or Navy. The Act states that such practices shall be a federal offense punishable by a fine of not more than \$1,000, or by imprisonment for not more than one year, or by both. The Act further provides that within such designated areas, the Secretaries of War and Navy, and the Federal Security Administrator are authorized and directed to take such steps as they deem necessary to suppress and prevent prostitution, and to accept the cooperation of the authorities of the states and their counties.

OBESITY FROM GLAND INJURY

Injury to the hypophysis, small but important gland embedded beneath the brain, is capable of causing dwarfism and great bodily fatness, Dr. Albert W. Hetherington of Northwestern University Medical School told his colleagues. . . . His findings were based on experiments with rats, whose hypophyses were purposefully injured by surgical means. The rats were subsequently killed and the glands microscopically examined. Five animals, in which the glands had been entirely destroyed, had developed as fat dwarfs; the remaining three, which had small fragments of their hypophyses, had developed normal body length, but these also were very fat.—*Science News Letter*, April 11, 1942.

REPORTS and ANNOUNCEMENTS

MEDICAL BROADCAST FOR JULY AND AUGUST

The Minnesota State Medical Association broadcasts weekly at 10:15 o'clock every Saturday morning over Station WCCO, Minneapolis, Station WLB, University of Minnesota. Speaker: William A. O'Brien, M.D., Director of Postgraduate Medical Education, Medical School, University of Minnesota.

July 4—Tetanus
July 11—Typhus Fever
July 18—Plague
July 25—Dental Disease

August 1—Dysentery
August 8—Whooping Cough
August 15—Chicken Pox
August 22—Rocky Mountain Spotted Fever
August 29—Diseases of Gums

A.M.A. MEETING

At the annual meeting of the American Medical Association held at Atlantic City, last month, Dr. Fred W. Rankin of Lexington, Kentucky, assumed the presidency and Dr. James E. Paullin of Atlanta, Georgia, was named president-elect. Dr. William J. Carrington of Atlantic City was elected first vice president; Dr. Olin West was reelected secretary and Dr. Herman Kretschmer of Chicago, treasurer. Dr. H. H. Shoulders of Nashville, Tennessee, was reelected speaker of the house and Dr. R. W. Fouts of Omaha, Nebraska, vice speaker.

New members of the Board of Trustees elected are: Dr. Edward L. Pallette of Los Angeles, Dr. Lloyd Nolan of Fairfield, Alabama.

The meeting in 1945 will be in New York City.

AMERICAN CONGRESS OF PHYSICAL THERAPY

The American Congress of Physical Therapy will hold its twenty-first annual scientific and clinical session September 9, 10, 11 and 12, 1942, inclusive, at the Hotel William Penn, Pittsburgh, Pa.

The annual instruction course will be held from 8:00 to 10:30 a.m., and from 1:00 to 2 p.m. during the days of September 9, 10 and 11 and will include a round-table discussion group from 9:00 to 10:30 a.m., Thursday, September 10.

The scientific and clinical sessions will be given on the remaining portions of these days and Saturday morning. A new feature will be an hour demonstra-

tion showing technique from 5:00 to 6:00 p.m. during the days of September 9, 10 and 11.

All of these sessions and the seminar will be open to the members of the regular medical profession and their qualified aids. For information concerning the seminar and program of the convention proper, address the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Illinois.

MEDICAL AND SURGICAL RELIEF COMMITTEE

The Medical and Surgical Relief Committee of America, with headquarters at 420 Lexington Avenue, New York City, has its state headquarters at the office of Dr. C. C. Kennedy, 807 Physicians and Surgeons Building, in Minneapolis.

The committee would appreciate donations of medical supplies, instruments, equipment or cash from physicians or the laity.

For further information regarding details or shipping instructions the following committee members may be consulted:

Minneapolis—Dr. Claude C. Kennedy; Dr. Owen D. Wangensteen, Dr. Gilbert Thomas.

Saint Paul—Dr. William R. McCarthy.

Rochester—Dr. Donald C. Balfour, Dr. Henry W. Meyerding.

Duluth—Dr. Arthur N. Collins.

Bemidji—Dr. Einar Johnson.

Crookston—Dr. J. F. Norman.

MINNESOTA STATE MEDICAL ASSOCIATION

Officers of the Minnesota State Medical Association elected to serve for the coming year at the meeting just closed in Duluth, include the following:

President—Stephen Baxter, Minneapolis

First Vice President—J. F. Norman, Crookston

Second Vice President—F. W. Lynch, Saint Paul

Secretary—B. B. Souster, Saint Paul

Treasurer—W. H. Condit, Minneapolis

Speaker of the House—W. W. Will, Bertha

Councilor, Fourth District—A. E. Sohmer, Mankato

Councilor, Sixth District—A. E. Cardle, Minneapolis

Councilor, Eighth District—W. L. Burnap, Fergus Falls

Delegates to American Medical Association—W. A. Coventry, Duluth, and A. W. Adson, Rochester.

Alternates—J. C. Hultkrans, Minneapolis and W. L. Burnap, Fergus Falls.

The 1943 meeting will be held in Minneapolis.

WOMAN'S AUXILIARY

Mrs. JOHN J. RYAN, *President*
Saint Paul, Minnesota
Mrs. L. R. BOIES, *Publicity Chairman*
Knollwood, Hopkins, Minnesota

County News

Mower.—The Mower County Auxiliary reports a profitable and pleasant year doing Red Cross sewing and knitting. At each meeting one member has led a discussion in some interesting subject.

On May 12, a dinner was held at the Fox Hotel in Austin in honor of the doctors. The welcome was given by Mrs. W. B. Grise and the response by Dr. J. G. W. Havens. Dr. Paul Leck, who was leaving for service in the air corps, and other doctors who expected to be called soon, were presented with gifts. Bridge followed the dinner.

The Auxiliary sponsored the appearance of Mrs. Rebecca Overmann, State Commander for the Control and Cure of Cancer, May 18. In addition to Mrs. Overmann's address, the film, "Choose to Live," was shown.

Stearns-Benton.—Stearns-Benton Medical Auxiliary recently held its annual meeting at Klock's Cafe in St. Cloud. Mrs. P. E. Barringer, retiring president, presided. Annual reports were given by officers and chairmen. Mrs. R. N. Jones was appointed delegate to the state convention in Duluth, with Mrs. Barringer the alternate.

The following officers were elected: Mrs. R. N. Jones, president; Mrs. William Friesleben, vice president; Mrs. John J. Gelz, secretary; Mrs. T. N. Fleming, corresponding secretary; Mrs. T. W. Hovorka, treasurer; Mrs. John B. Beuning, auditor; Mrs. J. P. McDowell, historian. Committees named were: finance, Mmes. Karl Walfred, M. J. Kern; membership, Mmes. L. M. Evans, S. J. Raetz, E. E. Keithohn; program, Mmes. J. B. Gaida, J. B. Beuning, C. A. Beuning, C. A. Rathbun; hospitality, Mrs. Jennie Hovorka; layette, Mmes. J. C. Buscher, Charles Donaldson; health and public relations, Mmes. J. P. McDowell, T. N. Fleming; publicity, Mmes. P. E. Barringer, William Friesleben; clipping, Mrs. W. W. Wenner, good cheer, Mrs. H. B. Clark.

Goodhue.—The Goodhue Medical Auxiliary puppet show on preventive medicine is consuming much time and interest of its members. To date, showings have been given at Hay Creek, Goodhue, Pine Island, Wanamingo, Kenyon, Cannon Falls rural community, and Cannon Falls high school. An exhibition is being prepared for the state meeting in Duluth.

The April meeting was held at the home of Mrs. J. Brusegard in Red Wing. The following nominating committee was appointed: Mmes. H. Claydon, R. Hedlin, and Nordholm.

In May eleven members were entertained at the home of Mrs. Russell Aanes in Ellsworth, Wisconsin.

Olmsted-Houston-Fillmore-Dodge.—At a recent Health Day Program given at Mayo Foundation House with the Altruistic Club of Rochester, the Olmsted-Houston-Fillmore-Dodge Medical Auxiliary gave some very worth-while facts on nutrition to club women attending.

Dr. R. M. Wilder, and Miss Mary Foley were the speakers.

According to Dr. Wilder, sugar rationing is one of the best health measures that could have been achieved for us and our families. Sugar is so highly refined that what vitamins or minerals may have been present in the cane or beet have been entirely removed. It only makes good foods more palatable. Bad foods have necessitated a nutritional program, and each one of us must make it our personal responsibility to know what kinds and amounts of food are needed for good health. The enrichment of breads and flours is valuable because of important vitamins added, and all women were urged to insist on these enriched products in order that they may be continued. Dr. Wilder scorned the use of soft drinks and candy bars by the public, particularly among children who consumed these products in place of milk and other foods valuable for vitamin, mineral, or iron content.

Miss Foley stressed the importance of developing sound food habits based on proven facts of nutrition and education, and being healthier as a result. She said that most individuals eat enough food from the caloric standpoint, but the food may be lacking in essentials that result in positive health. Milk, meat, vegetables, and fruits are desirable for proper diet. Good food information may be secured through the "Consumer's Guide."

Approximately 100 women attended the program which was followed by tea. Mrs. M. J. Anderson, Medical Auxiliary president, and Mrs. S. B. Shonyo, Altruistic Club president, poured.

At the May meeting of the Auxiliary held at the Mayo Foundation House, Mrs. H. L. Williams was elected president. Other officers elected were Mrs. John M. Waugh, vice president, and Mrs. T. L. Pool, secretary-treasurer. Dr. Jorge de C. Barbosa, a fellow in the Mayo Foundation, gave a talk on his native Brazil.

St. Louis.—Mrs. John J. Ryan, president of the State Auxiliary, was the guest of honor at the annual meeting of the St. Louis County Auxiliary held in Duluth, Tuesday, May 12. She came to confer with members on the State Auxiliary convention.

West Central.—A dinner meeting was held May 13 at Morris by the West Central Auxiliary. Mrs. John J. Ryan, state president, was the guest of Mrs. Allen.

Members of the Auxiliary to the State Medical Association extend to Mrs. John J. Ryan, president, their sincere sympathy in the recent death of her mother.

In Memoriam

Harley James Gunderson

Dr. H. J. Gunderson, formerly of Minneapolis, died at Los Angeles, May 27, 1942.

Dr. Gunderson was born in Sheboygan, Wisconsin, January 19, 1889, where he attended the public schools. He received his medical degree from Northwestern University in Chicago in 1911 and interned at Saint Elizabeth Hospital at Danville, Illinois.

Dr. Gunderson practiced in Minneapolis with his brother, Dr. Nels Gunderson, from 1912 until 1927, when he moved to California. During this period he took postgraduate work in Germany for a year and in China for six months.

He was a member of the American College of Surgeons and the Hennepin County Medical Society when he practiced in Minneapolis. He was also a Mason and for many years was on the staff of the Swedish Hospital in Minneapolis.

Dr. Gunderson is survived by his wife Winifred Coe Gunderson; his son, Harley J. Gunderson, Jr., who will graduate from the Medical School of the University of California in February, 1943; his father, Captain Nels A. Gunderson, of Sheboygan; a brother, Dr. Nels A. Gunderson, of Minneapolis; and a sister, Mabel Gunderson, of Sheboygan.

Philip Allen Halper

Dr. Philip A. Halper, a graduate of the University of Minnesota Medical School in 1923 and well known in the Twin Cities, died April 21, 1942, in Palm Springs, California, of hypertension, at the age of forty-four.

Dr. Halper interned at the Ancker Hospital, Saint Paul, and acted as assistant city and county physician in Saint Paul in 1924-25. He moved to Chicago and became associate ophthalmologist at the Illinois Eye and Ear Infirmary and later attending ophthalmologist at the Michael Reese Hospital and the Mandel Clinic.

Dr. Halper was a member of the American Academy of Ophthalmology and Otolaryngology, a fellow of the American College of Surgeons, a member of the American Board of Ophthalmology and the American Board of Otolaryngology, and an associate in his specialty at the University of Illinois College of Medicine. He was also an associate editor of the *Cyclopedia of Medicine*.

Edward Oscar Thorson

Dr. Edward O. Thorson of Luverne, Minnesota, died at the Luverne Hospital, May 27, 1942, at the age of sixty-seven years.

Dr. Thorson was born at Mount Horeb, Wisconsin, February 15, 1875. After attending public schools there he attended the Mount Horeb Academy for three years, enrolling at the age of fourteen. He clerked in a store in Madison, Wisconsin, for several years and then attended Bennett Medical College in Chicago where he graduated in 1906.

Dr. Thorson began practice at Colton, South Dakota.

JULY, 1942

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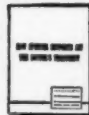
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In August, 1908, he came to Luverne where he has since practiced.

Dr. Thorson was married in 1907 at Colton to Alma Kleven. After her death he married Laura Shutriet of Charles City, Iowa, in 1931.

Surviving him are his widow and three daughters: Mrs. Theodore Schoon, and Mrs. Jack Kent both of Luverne and Mrs. Ray Fisher of Sioux Falls.

Dr. Thorsen was a member of the Southwestern Minnesota Medical Society, the Minnesota State and American Medical Associations. He was also a Blue Lodge Mason of many years standing, being a member of the Ben Franklin Lodge No. 114 of Luverne.

According to those who knew him, Dr. Thorson, although quiet and unassuming in manner, inspired confidence and close friendships and his passing will create sincere sorrow in a wide circle throughout the country.

UNITED CHINA RELIEF

United China Relief's "unique experiment" in the use of 22 topflight industrial executives, who contributed their time and talents for a three month's period to organize the United China Relief national drive, has been "an unqualified success," Paul G. Hoffman, national chairman, declares in his first progress report to United China Relief committees throughout the country.

Mr. Hoffman reported that to date 1,815 cities had been organized for the drive, and among these, 109 cities had included United China Relief in their war chest and community chest campaigns. He revealed that although the national campaign was only well launched, total funds received to date aggregated \$3,500,000 and \$1,500,000 additional had been accepted in war chest and community chest quotas. He said that already 309 communities organized by United China Relief's "lend-lease" men had exceeded their quotas, having raised over \$1,000,000.

He attributed the general acceptance of quotas and the national support of the campaign in large part to "the great contribution made by industry in loaning us its executives." He added, "Their assignment to the United China Relief job represented a substantial sacrifice by their firms at a time when American industry is in a period of transition aimed at getting into high gear for maximum war production."

In summing up their achievement, Mr. Hoffman pointed out that the funds received so far are close to the total received last year and the number of communities taking part in the drive exceeds by a large number last year's list.

"The successful progress of the drive so far is particularly heartening because China's relief needs this year are more than double those of last year," Mr. Hoffman declared. "The fall of Malaya, Hongkong and Burma have sent back into China a pitiful horde of hundreds of thousands of refugees absolutely penniless and with only the clothes on their backs. What precious personal belongings they tried to bring with them have been stripped from them by rapacious Japanese sentries, and the hardships of their journey home have so weakened them that they are easy prey to disease."

OF GENERAL INTEREST

A son was born to Dr. and Mrs. George X. Levitt of Saint Paul, May 9.

* * *

Parents of a daughter born May 31 are Dr. and Mrs. Karl d'A. Andersen of Minneapolis.

* * *

Dr. and Mrs. John E. Schroepel of Winthrop announce the arrival of their third son, Douglas Arthur, born June 18.

* * *

Dr. Anthony A. Schmitz, who has been associated in practice with Dr. E. G. Nethercott of Pine City, joined the staff of the Mesaba Clinic in Hibbing, June 2.

* * *

Dr. Walter P. Gardner, superintendent of the State Hospital at Anoka, has been made a fellow of the American Psychiatric Association.

* * *

The second Naval Medical Specialists Unit from the Mayo Clinic, consisting of nine members, reported for active duty, July 1.

* * *

Dr. Waltman Walters of Rochester was given an honorary degree of doctor of laws by the Hahnemann Medical College in Philadelphia, June 11. Dr. Walters delivered the commencement address there.

When the annual meeting of the American Orthopedic Association was held in Baltimore, June 3-6, Dr. Wallace H. Cole of Saint Paul was among the speakers. His subject was "Pin Fixation of War Fractures."

* * *

Dr. Myron M. Weaver has been appointed a physician in the University of Minnesota Students' Health Service, and assistant professor of preventive medicine and public health.

* * *

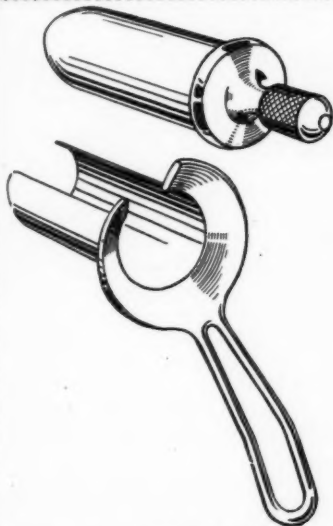
Dr. T. R. Schweiger of the Morsman Clinic in Hibbing left last month for the Great Lakes Naval Training station at Great Lakes, Illinois, where he was commissioned a senior lieutenant.

* * *

Married in the chapel at Fort Sill, Oklahoma, May 22 were Dr. Karl Sandt and Miss Ruth Bloomgren of Minneapolis. Dr. Sandt is a captain in the United States General Hospital Unit No. 26.

* * *

The importance of early diagnosis and treatment of tuberculosis was discussed by Dr. Karl Pfuete, director of the Mineral Springs Sanatorium at Cannon Falls, before a recent meeting of the Rochester Kiwanis Club.



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Newly elected chief of staff at Fairview Hospital in Minneapolis is Dr. Richard W. Gier. Dr. Lloyd A. Stelter is vice president and Dr. Hoff D. Good, secretary-treasurer.

* * *

Dr. E. C. Strauss, who has been associated with the Biwabik Hospital in Biwabik for the past several months, has entered the service of the United States Navy. He is stationed at the Navy Hospital in Philadelphia.

* * *

Dr. Paul A. O'Leary of Rochester is chairman of the consulting staff of the recently organized Dermatoses Investigations Section of the National Institute of Health.

* * *

Dr. R. K. Minge, who has been associated with the Clarkfield Community Hospital in Granite Falls for several years, has gone to Cleveland, Ohio, where he has accepted a fellowship at Crile Clinic.

* * *

As a representative of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, Dr. Harold S. Diehl of Minneapolis was in Milwaukee, June 17, to speak at a meeting of the Medical Society of Milwaukee County.

* * *

The name of the Lymanhurst Health Center in Minneapolis has been changed to The Public Health Center, the name Lymanhurst being removed at the request of

heirs of the donor of the property. In the transaction, a quitclaim deed for the property was given the city.

* * *

Dr. and Mrs. Francis Mark Walsh of Minneapolis are the parents of a son, Michael Francis, born May 6.

Dr. Walsh, who has received his commission as captain in the Medical Corps, United States Army, will leave for active duty about July 18.

* * *

Married in Fort Sill, Oklahoma, early in May were Dr. Frederick B. Mears and Miss Helen Scallen. Dr. Mears, a first lieutenant in the surgical service of the United States General Hospital Unit No. 26, recently was transferred to Camp Custer, Michigan.

* * *

A Rochester man, Dr. Waltman Walters, was chosen vice president of the American Medical Golfing Association at its twenty-eighth annual tournament at Seaview Country Club in Atlantic City, June 8. The 1943 tournament will be held in San Francisco in June.

* * *

Dr. Robert Meyer, associate professor of obstetrics and gynecology at the University of Minnesota, was a special guest, by invitation, of the American Gynecological Society at its meeting in Skytop, Pennsylvania, June 15-17. Dr. Meyer is an honorary member of the society.

* * *

Dr. John A. Paulson, who has been in private practice in Rochester for the past five years, has closed his office, preparatory to entering the services of the army

OF GENERAL INTEREST

air corps medical division. He will study anesthesia at the Mayo Clinic for three months before entering the service.

* * *

When the twenty-fifth annual meeting of the American Broncho-esophagological Association was held in Atlantic City, June 8-9, speakers included Dr. Kenneth A. Phelps of Minneapolis, whose topic was "Some Further Observations on Tuberculous Tracheobronchitis."

* * *

Dr. H. Paul Johnson of Harmony has gone to New York where he has accepted a fellowship in ophthalmology at Columbia University. Dr. Johnson, who received his degree in medicine at the University of Minnesota, has been practicing in Harmony since December, 1932.

* * *

Dr. Eleanore Iverson of Minneapolis, formerly of Moorhead, has joined the medical staff of the Fergus Falls State Hospital. Dr. Iverson, a graduate of the University of Minnesota in 1935, is on the Women's Service. Her husband is a physician in the armed forces.

* * *

Establishment of a Sister Kenny Clinic for the treatment of poliomyelitis in The Public Health Center in Minneapolis, has been approved by the board of public welfare. Plans are being considered for the construction of two stories to the present clinic building to carry on the work.

Dr. A. C. Broders is the newly elected president of the Mayo Foundation chapter of Sigma Xi. He succeeds Dr. E. V. Allen.

Other officers named at the eighteenth annual dinner meeting, June 18, are Dr. R. K. Ghormley, vice president; and Dr. H. E. Essex, secretary-treasurer.

* * *

Dr. James D. Trask, associate professor of pediatrics at the Yale Medical School, died in Chicago in May from peritonitis. Dr. Trask was nationally known for his investigations in the field of infantile paralysis and with his colleague, Dr. John R. Paul, was awarded the John Phillips Memorial Medal of the American College of Physicians at Saint Paul in April.

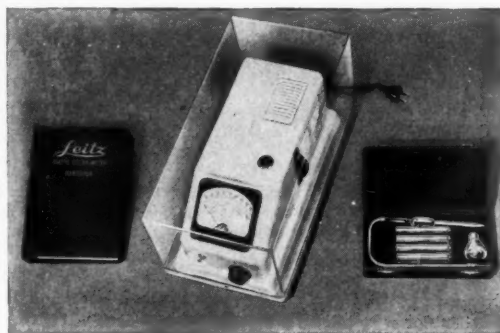
* * *

A Rochester father and son received high degrees from Northwestern University at Evanston, Illinois, at the graduation convocation last month.

Dr. Donald C. Balfour, Sr., director of the Mayo Foundation, was given the honorary degree of doctor of science, *honoris causa*. His son, Dr. Donald C. Balfour Jr., received the degree of bachelor of medicine.

* * *

The University of Minnesota Medical School and its various branches awarded 363 degrees at the June commencement exercises. Previously, during the college year, it had presented 158 degrees, thus making a grand total of 521. These figures do not include graduate degrees. Among the various colleges within the Uni-



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versity, it ranks third in the number of degrees awarded.

* * *

The Human Serum Laboratory at the University of Minnesota is anxious to contact persons over eighteen years of age who have had measles or scarlet fever within the last six months. Their blood is wanted for immunization purposes. Such persons are asked to communicate with the Serum Laboratory for further information.

* * *

On the program for the twentieth annual session of the Pacific Northwest Medical Association meeting held in Portland, Oregon, June 17-20 was Dr. Arlie R. Barnes of Rochester, who spoke on "Pulmonary Embolism; Changing Concepts of Coronary Artery Disease and Electrocardiographic Abnormalities in Various Types of Heart Disease."

* * *

Dr. Mario Fischer, Duluth city health officer, has been appointed medical director of St. Louis County. The appointment was made by the St. Louis County welfare board.

Dr. Fischer will serve in a part-time capacity, continuing his duties as city health officer under an arrangement with the city council.

* * *

Dr. E. H. Lutz, who has been on the staff of the Willmar State Hospital for the past five years, resigned his position, effective July 2, to go to Salem, Oregon, where he will become a member of the staff of the Oregon State Hospital.

Accompanying him to Salem were his wife and daughter, Donna Mae.

* * *

Dr. P. S. Hench of Rochester was awarded a distinguished honor by the Heberden Society of London, which presented him with the Heberden medal for 1942. This is the first time the award has been made outside of Great Britain since the society's founding in 1936.

The award, given annually, is made "in recognition of outstanding contribution to the knowledge and progress in rheumatic diseases."

* * *

Dr. Robert Alway and Dr. Sophia Chamberlin were married in Saint Paul, May 21. They are making their home in Minneapolis, where Dr. Alway is a resident in pediatrics at the General Hospital, and his wife is a fellow in pediatrics at the University Hospitals.

Dr. Alway is a graduate of the University of Minnesota Medical School, and Mrs. Alway, of the Yale School of Medicine.

* * *

The largest number of medical courses ever given at the University of Minnesota Center for Continuation—36—were held there during the 1941-42 college year just completed. A total of 1,527 persons registered for these 36 courses.

When the Center opened in 1937, only six medical courses were given during the half year from January

to June. Registrations totaled 152. Ten courses, with registrations totaling 349, were held there during the year 1937-38. The number of courses offered and the number of persons registered have shown a steady increase since then.

* * *

Dr. Thomas H. Dickson of Saint Paul, medical director of the Minnesota Mutual Insurance Company, was named chairman of the American life medical section for the ensuing year, when the organization held its convention at Colorado Springs, Colorado, last month.

Dr. Dickson who served as vice chairman until last April when he assumed the chairmanship following the death of Dr. W. F. Blackford, presided at the meeting.

* * *

Dr. Sidney J. Weisman of Minneapolis, son of Major and Mrs. Samuel A. Weisman, married Miss Marjorie Zalk of Duluth June 10 in Duluth at the home of the bride's parents.

Dr. Robert Rogers of Minneapolis was best man.

The couple will make their home in Minneapolis, where Dr. Weisman has taken over the practice of his father, who is serving with the United States General Hospital Unit No. 26 at Fort Sill, Oklahoma.

* * *

A bronze medal for "excellence of presentation" of their exhibit at the recent meeting of the American Medical Association in Atlantic City was awarded Drs. L. M. Randall, M. C. Piper, L. A. Brunsting and M. B. Dockerty of Rochester for their studies on cancer of the ovary.

Dr. H. S. Diehl, dean of medical sciences at the University of Minnesota, was chairman of the Committee on Awards for the scientific exhibit.

* * *

Facilities of the division of sanitation in the Minnesota Department of Health are being utilized this summer for an intensive course in public health engineering offered by the University of Minnesota Department of Preventive Medicine and Public Health.

The courses, limited to graduates in engineering or persons who have had suitable experience in the field of environmental sanitation, consist of lectures, conferences, laboratory exercises and field demonstrations.

* * *

When the Minnesota Society of Neurology and Psychiatry met in Rochester, May 23, a surgical clinic was conducted by Drs. A. W. Adson, J. G. Love and G. S. Baker.

Speakers at the medical session which followed the clinic were Drs. J. R. Brown, C. L. Yeager, J. R. Miller, J. W. Kernohan, P. I. Hoagland and L. M. Eaton, all of Rochester.

Dr. M. B. Dockerty spoke on archery at a luncheon at the Mayo Foundation House.

* * *

Dr. Judson Leeman, who received his medical degree from the University of Minnesota in 1940, has accepted a post as assistant rector of an Episcopal church in Port Chester, New York. Trained in both medicine

JULY, 1942

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- FRACTURES & TRAUMATIC SURGERY**—Two Weeks Intensive Course will be offered starting September 21. Informal Course available every week.
- GYNECOLOGY**—Two Weeks Intensive Course will be offered starting October 5. One Month Personal Course starting August 3. Clinical and Diagnostic Courses every week.
- OBSTETRICS**—Two Weeks Intensive Course will be offered starting September 21. Three Weeks Course starting August 10. Informal Course every week.
- OTOLARYNGOLOGY**—Two Weeks Intensive Course will be offered starting September 14. Clinical and Special Courses every week.
- OPHTHALMOLOGY**—Two Weeks Intensive Course will be offered starting September 28. Five Weeks Course in Refraction Methods starting October 19. Informal Course every week.
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and the ministry, Rev. Leeman was graduated from the General Theological Seminary in 1935 and then entered the University of Minnesota Medical School. For the past year he has served as resident physician of St. Luke's hospital in New York.

After a year as assistant rector of St. Peter's church in Port Chester, Rev. Leeman plans to go to the Orient as a medical missionary.

* * *

Married in Hibbing, June 6, were Miss Mary Katharine Bowen, daughter of Dr. and Mrs. R. L. Bowen of Hibbing, and Dr. A. Carlyle Tingdale, son of Dr. and Mrs. A. C. Tingdale, Sr., of Minneapolis.

Dr. and Mrs. Tingdale are at home in Hibbing, where Dr. Tingdale is a member of the Mesaba Clinic staff. He is a graduate of the University of Minnesota School of Medicine.

Members of the bridal party included Dr. Harold Miller of Minneapolis, Dr. L. W. Johnsrud and Dr. Edward Zeman of Hibbing.

* * *

Two annual meetings of county Public Health Nursing Committees were addressed last month by Dr. W. A. O'Brien, director of postgraduate medical education at the University of Minnesota. On June 18 he spoke before the Pine County group at Pine City, and on June 23 before the Watonwan County committee at St. James.

Dr. O'Brien also was among the speakers at the special training course in building operation and maintenance held on the University of Minnesota campus, June 15-19, for school custodians and engineers. His subjects were "First Aid in the Schools" and "The School Health Program."

* * *

Dr. Lawrence R. Boies of Minneapolis, director of the division of otolaryngology at the University of Minnesota Medical School, will address the meeting of the Medical Association of Montana in Missoula, July 8-9. His subject will be "Symptom of Headache."

At the meeting of the Montana Academy of Ophthalmology and Otolaryngology in Missoula the same week, Dr. Boies will present two papers: "Problem of Hearing Impairment" and "Acute Frontal Sinusitis."

Dr. Boies also spoke at the recent annual meeting of the North Dakota Academy of Ophthalmology and Otolaryngology in Jamestown, May 19, on "The Problem of Deafness."

* * *

Under the accelerated program at the University of Minnesota Medical School, the "fall-quarter" freshman medical class began its work June 16 instead of September 28. All other medical students are continuing their studies throughout the summer.

The freshman class has been increased to its absolute maximum of 125, the highest number for which there is adequate facilities.

The accelerated program and the larger class enrollment is placing the heaviest teaching burden of all time on the medical school faculty. Due to the war,

OF GENERAL INTEREST

the faculty has lost many of its members, 85 of them having gone into active service with the army or navy, as of June 1.

* * *

The Navy department at Washington has ordered the Medical Specialist Unit No. 56, formed at the Mayo Clinic in Rochester with Dr. Waltman Walters as organizer, to duty.

The unit, which was to leave about July 1, is the second of its kind to be called to duty from the Mayo Clinic. Its members are:

Commander Walters, surgery; Lieutenant Commander C. H. Watkins, medicine; Lieutenant Commander John D. Camp, radiology; Lieutenant R. W. Cragg, pathology; Lieutenant T. J. Hughes, otolaryngology-rhinology; Lieutenant L. O. Underdahl, neurology; Lieutenant D. H. Pattison, urology; Lieutenant H. R. Butt, medicine; and Lieutenant M. B. Coventry, orthopedic surgery.

Drs. Walters, Watkins, Cragg and Butt are members of the Mayo Clinic staff, while the others are fellows in the Mayo Foundation.

* * *

In accordance with new army regulations reducing the size of the professional staff of general hospital units, 14 of the 55 medical officers of the United States General Hospital Unit No. 26 have been detached from the unit and transferred from Fort Sill, Oklahoma, to Camp Custer near Battle Creek, Michigan.

They are:

Medical Service: Stanley W. Lundblad, Captain, M.C.; Robert A. Green, First Lieutenant, M.C.; Frank G. Kiesler, First Lieutenant, M.C.; Rodney F. Sturley, First Lieutenant, M.C.

Surgical Service: Conrad J. Holmberg, Captain, M.C.; Howard Hall, First Lieutenant, M.C.; Richard E. Reilley, First Lieutenant, M.C.; Frederick B. Mears, First Lieutenant, M.C.

Laboratory Service: Evrel Larson, Captain, M.C.

Radiology Service: Eugene E. Ahern, First Lieutenant, M.C.

Dental Service: Virgil R. Ohlen, First Lieutenant, D.C.

Administrative Officers: Robert M. Barr, Major M.C., Mess Officer; Albert Hayes, First Lieutenant, M.C., Registrar.

* * *

The importance to nation-wide research of the tuberculosis control demonstration, instituted in Meeker County in May, 1941, has been recognized by the gift of \$1,000 from the National Tuberculosis Association for use in continuing the project.

Announcement of the appropriation was received by Dr. E. A. Meyerding of Saint Paul, executive secretary of the Minnesota Public Health Association. The money is to defray the cost of x-rays and to provide a nurse for follow-up work.

The demonstration, launched by the tuberculosis committee of the Minnesota State Medical Association, of which Dr. J. A. Myers of Minneapolis is chairman, has complete coöperation, not only of Meeker County's

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citizens, but of its physicians who are giving their service to it without charge.

Last month Miss Mary Dempsey, statistician of the National Tuberculosis Association, was in Litchfield to make a first-hand study of the project, which seeks to eliminate tuberculosis through giving tuberculin tests to every resident of the county.

* * *

A total of 434 Minnesota physicians had joined the medical service of the armed forces, as of June 15, according to the records of the Minnesota State Medical Association, and considerable more are expected to answer the call to arms. There are approximately 3,400 registered physicians in the state.

Among physicians who have entered the services of the Medical Corps, United States Army, within the last few weeks are:

Dr. A. B. Rosenfield, Hibbing school physician, who reported for duty June 12 in Omaha. He has the rank of major.

Dr. W. M. Haller of Bemidji, who has been commissioned a captain.

Dr. E. R. Addy of Gilbert, commissioned a first lieutenant.

Dr. Emil Johnson of Minneapolis, deputy coroner, who has been commissioned a first lieutenant. He reported for duty at Camp Carson near Colorado Springs, Colorado.

Dr. C. B. Abbott, Springfield, who has been commissioned a captain.

Dr. L. E. Sjostrom, Storden.

The University of Minnesota Board of Regents last month accepted the following gifts for medical research:

From the Rockefeller Foundation, \$15,900, to cover a three-year study of the mechanism of osmosis under Professor Maurice B. Visscher, head of the department of physiology.

From the Nutrition Foundation, Inc., \$5,000 in support of research on nutrition and resistance to fatigue in normal man to be conducted by Dr. Ancel Keys.

From the National Research Council, \$3,000, for continuation of study of congenital absence of teeth in human beings and its significance as a factor in heredity, under Dr. P. J. Brekhuis of the School of Dentistry and Dr. C. P. Oliver, director of the Dight Institute; also \$500 for study of the pituitary glands of children who have met with sudden and chiefly accidental deaths, under the direction of Dr. A. T. Rasmussen of the Department of Anatomy.

From the National Foundation for Infantile Paralysis, \$1,575, for further training courses in the Sister Kenny technique of poliomyelitis treatment.

The Citizens Aid Society of Minneapolis notified the board that it has voted to continue for three years its \$10,000 annual appropriation in support of the Cancer Institute Research Fund.

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BOOK REVIEWS

Hospital Notes

Miss Martha Stahler has accepted a position as superintendent of the Stevens County Hospital at Morris.

* * *

The Southwestern Minnesota Hospital in Heron Lake, according to Dr. Charles W. Rogers, has undergone an extensive modernization program.

* * *

Open house was held June 7 at the Glencoe Municipal Hospital, recently completed at a cost of approximately \$80,000. There were conducted tours.

Of yellow brick and tile, the building is completely fireproof. The outside wall of the operating room is made of glass blocks, and the room is equipped with explosion-proof devices.

Miss Clara Draxton is superintendent.

* * *

Completion of the new addition to the Swenson Memorial Hospital in Canby was observed May 31 with an open house.

Costing approximately \$52,000, the new fireproof addition and the remodeled hospital give Canby complete hospital facilities for emergency, surgical and medical treatment. It has a thirty-five-bed capacity. Mrs. Clara Lundring is superintendent.

BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

THE ESSENTIALS OF OCCUPATIONAL DISEASES. Jewett V. Reed, M.D., and A. K. Harcourt, M.D., Indianapolis. 212 pages. Price \$4.50. Springfield, Illinois: Charles C. Thomas, 1941.

As the name of this textbook implies, the subject is necessarily arranged for reference. It is essentially a compilation of notes by the authors. Half of the book is given over to tabulation and discussion of chemical poisons; the remainder to the discussion of lesions and diseases due to occupations. It is well written and should prove valuable to all physicians and especially those devoting their time exclusively to compensation work and industrial medicine.

The rapidly increasing importance of compensable disease and the all too prevalent threats of medico-legal controversy and impending socialization of medicine, makes a textbook of this kind a valuable reference to all physicians and surgeons in practice in the United States.

V. N. PETERSON, M.D.

IMMUNOLOGY. Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P. Professor of Bacteriology, University of Kansas, and Pathologist to the Lawrence Memorial Hospital, Lawrence, Kansas. 2nd edit. 639 pages. Illus. Price, \$6.50. Cloth. St. Louis: C. V. Mosby Co., 1941.

This is the second edition of a very useful book on the expanding and intricate subject of Immunology.

While originally planned and used as a textbook for students it will be found to be a very thorough, although condensed discussion of the whole field of infection, resistance and diagnostic laboratory procedures. A judicious background of the principles of Pathology, Physiology, Biology and Chemistry involved is presented and the analysis of the underlying principles of Immunology is very thorough and understandable. Standard techniques are presented and the reasons for the various steps made manifest.

As a basis for exhaustive study in any allied field the book is very satisfactory and the exhaustive bibliography at the end of each chapter makes the necessary collateral reading readily obtainable.

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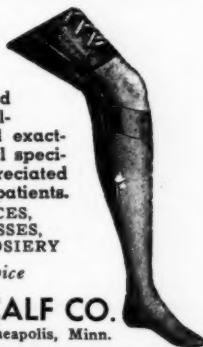
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COMMUNICABLE DISEASE NURSING. Theresa I. Lynch, R.B., Ed.D. Instructor in Education, New York University; formerly Superintendent of Nurses and Director of Instruction, the Willard Parker Hospital, New York. 678 pages. Illus. Price \$2.75, cloth. St. Louis: C. V. Mosby Company, 1942.

This book is a presentation of Communicable Disease Nursing as it is taught in schools of nursing, for the care of patients both in the hospital and in the home. It is especially helpful in its presentation of the history of communicable diseases and the part they have played in ancient and modern civilizations, taking one through the progress made in their control. Each disease is discussed and the present methods of diagnosis, treatment and control are presented as well as the details of the nursing care. There are pictures illustrating the gown technique and care of mattresses, linen, dishes, etc., in addition to color plates of manifestations of the disease. There is also a presentation of the methods used by public health nurses in their care of patients in their homes. It is particularly good in presenting the details of nursing care, procedures, and isolation techniques in the care and use of instruments and equipment. The book is very complete and should prove a valuable reference for any nurse working with communicable diseases.

CATHERINE E. VAVRA, R.N.
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